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CATALOGUE

OF THE

BIRDS

IN THE

BRITISH MUSEUM.

VOLUME XXII.

LONDON:

PRINTED BY ORDER OF THE TRUSTEES.

1893.

CATALOGUE

OF THE

GAME BIRDS

(PTEROCLETES, GALLINÆ, OPISTHOCOMI, HEMIPODII)

IN THE

COLLECTION

OF THE

BRITISH MUSEUM.

BY

W. R. OGILVIE-GRANT.

LONDON:
PRINTED BY ORDER OF THE TRUSTEES.

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PREFACE.

The present volume treats of four Orders of Birds, constituting the greater bulk of what are commonly termed Game Birds. The numbers of species described and of specimens at present in the Collection are as follows:—

	Species.	Types.	Specimens.
Pterocletes	17	2	522
Gallinæ	384	95	5954
Opisthocomi	1	..	14
Hemipodii	24	5	531
	426	102	7021

In the first category those forms are included to which, in the author's opinion, no higher than subspecific rank should be assigned; only 23 of these species and subspecies are still unrepresented in the Collection. Beside the 102 types of recognized species the Collection contains 50 other typical specimens which are now considered identical with previously named species.

ALBERT GÜNTHER,
Keeper of the Department of Zoology.

British Museum (N. H.),
Nov. 17, 1893.

INTRODUCTION.

The *Pterocletes* or Pigeon-Grouse form a small but well-marked group containing only 3 genera and 17 species, and appear to have been quite satisfactorily placed in a separate order between the *Columbæ* or Pigeons and the *Gallinæ* or True Game Birds, for they combine many characters found in both these orders.

The second order, *Gallinæ*, contains the great bulk of the species treated of in the present volume. I fully anticipate that I shall be blamed by some for having united all the Nearctic "species" of *Lagopus* described by American Ornithologists with *L. rupestris*; but I am sure that unless the practice be adopted of distinguishing every individual variation or slight climatic variety by a separate specific name, a careful study of these birds will lead to the same conclusion as that to which I have arrived (see p. 49). Had the Red Grouse (*Lagopus scoticus*), that most variable of all the species, been a North-American bird, it would doubtless have afforded even better material for the multiplication of species than *L. rupestris*. Perhaps one of the most interesting facts investigated during the preparation of this work is the peculiar and, as far as I am aware, unparalleled case regarding the moults of the male and female of *L. scoticus* (see p. 36). Two years ago the Museum collection contained but few examples of this interesting bird, and these were mostly without date, sex, or exact locality, while the Common Partridge (*Perdix perdix*) was equally poorly represented. Thanks to the kind contributions of numerous friends and correspondents, the series of both these birds is now very fine, and in fact nearly complete, representing as it does birds of both sexes in every month of the year and showing all the changes of plumage they go through. Of the Red Grouse extreme types of variation are still required, as also examples from different parts of Ireland, especially the south; while of the Partridge specimens from the eastern parts fo its range in the Barabinska Steppes and Altai Mountains

are wanted to completely illustrate the geographical distribution of the species.

A satisfactory arrangement of the many (59) genera of the great family *Phasianidæ* has been by no means an easy task. There appears to be no real line of demarcation between the true Pheasants (*Phasianinæ*) and the Partridges (*Perdicinæ*), the two groups merging gradually into one another in such forms as *Bambusicola*, *Ptilopachys*, and *Galloperdix*. The shape of the wing appears to be the best, and in fact almost the only, character of importance for distinguishing these groups. All the *Phasianinæ*, except one genus, have the first primary quill much shorter than the tenth, whereas in the *Perdicinæ* the first primary is equal to, or longer than, the tenth. Unfortunately, the exception among the former is the very important genus *Phasianus*, which has the first primary, like that of most Partridges, much longer than the tenth. On the other hand, some of the Partridges have the first primary slightly shorter than the tenth. Thus even this otherwise well-marked character breaks down, and in order to artificially separate these two groups it is necessary to have recourse to secondary or supplementary characters, such as the length of the tail. By this means only the family *Phasianidæ*, as represented in the Old World, together with the American genus *Meleagris*, may be divided into two sections.

Among the *Megapodiidæ* some species have been founded on very young birds, and others even on eggs. In the latter case I have refused to recognize their right to priority (for example, *Megapodius brazieri* and *M. stairi*), for I think such names ought never to be given, much less recognized; while those founded on chicks have but little more claim to be retained (for example, *Aepypodius arfakianus*).

Opisthocomus hoazin, the only representative of the Order *Opisthocomi*, in spite of its many striking peculiarities, seems to be most naturally placed in close proximity to the *Cracidæ*.

The value of the great donations made by Messrs. Hume, Wardlaw Ramsay, Salvin, Godman, and Seebohm can be fully estimated by an inspection of the lists of specimens on the following pages; and I may safely say that any good work that may be found in this volume is largely due to the splendid series of birds in these noble collections.

Among the numerous smaller but important donations may be specially mentioned those of Emin Pasha, Capt. the Hon. A. Hay Drummond, H. C. V. Hunter, Esq., F. J. Jackson, Esq., F. Menteith Ogilvie, Esq., and Lord Thurlow.

I have to acknowledge assistance of various kinds which I have received from many friends, and to return them my best thanks. I wish particularly to mention Professor Barboza du Bocage, Mr. Büttikofer, Prof. R. Collett, Mr. H. E. Dresser, Mr. H. O. Forbes, Signor Gestro, Mr. E. Hartert, Dr. Jentink, Dr. T. Pleske, the Hon. Walter Rothschild, Count Salvadori, Dr. Schauinsland, Capt. Shelley, Dr. J. Stolzmann, and Canon Tristram. I wish also particularly to thank my colleague Dr. R. Bowdler Sharpe, who, by his intimate acquaintance with the history of the specimens in the Museum collection, has saved me from frequent errors into which I should otherwise have fallen.

The same symbols are employed as have been customary in previous volumes of the 'Catalogue.' "[P.]" means "Presented by"; "[C.]" equals "Collected by"; "[E.]" signifies "Received in Exchange."

W. R. OGILVIE-GRANT.

British Museum, N. H.,
14th November, 1893.

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CATALOGUE

OF

BIRDS.

Order VI. PTEROCLETES.

Maxillo-palatines not coalesced with one another or with the vomer; nasals schizorhinal; dorsal vertebræ heterocœlous; two notches on each side of the posterior margin of the sternum, the inner notch sometimes reduced to a foramen.

Bill as in the Gallinæ, but not so strongly developed.

Feet with three toes only, or with the hallux present in a rudimentary condition.

Oil-gland nude.

The lateral bare tracts extend to the base of the neck only; well-developed aftershafts to the feathers of the body. Fifth secondary quill wanting.

Young covered with down, and able to run in a few hours.

Eggs three, double-spotted, and equally rounded at both ends. Nest none.

The general structure of the "Sand-Grouse," or better still, as Huxley calls them, "Pigeon-Grouse," presents many striking Columbine characters, such as in the vocal organs, pterygoids, basipterygoid processes, shoulder-girdle, sternum, and especially the great deltoid process of the humerus; but the digestive organs are Galline.

On the whole these birds form a well-marked order intermediate between the *Columbæ* and *Gallinæ*.

Mostly migratory; inhabiting Africa, South Europe, and Asia.

Family PTEROCLIDÆ.

Tarso-metatarsus very short and feathered; toes feathered or naked. Wings long and pointed.

Key to the Genera.

I. Hallux absent. Middle tail-feathers elongate and pointed ..... 1. SYRRHAPTES, p. 2.
II. Hallux present, but rudimentary.
a. Middle tail-feathers elongate and pointed. 2. PTEROCLURUS, p. 6.
b. Middle tail-feathers not elongate ..... 3. PTEROCLES, p. 16.

1. SYRRHAPTES.

	Type.
Syrrhaptes, *Illiger*, *Prodromus*, p. 243 (1811)	S. paradoxus.
Nematura, *Fisch. Mém. Soc. Mosc.* iii. p. 271 (1812) ..	S. paradoxus.
Heteroclitus, *Vieill. Analyse*, p. 53 (1816)	S. paradoxus.

Tarsi and toes feathered; hallux absent; middle tail-feathers elongate and pointed; wings long and pointed.

Range. Asia; Khirgiz Steppes to North China; and North of Lake Baikal. South to the Sutlej Valley.

Key to the Species.

A. Abdomen with a very large black patch.
a. Sides of the neck not spotted with black; across the breast a zone of white feathers each with a narrow transverse subterminal black band. Throat dull rusty red, not bounded by a black line..... *paradoxus* ♂, p. 2.
b. Sides of the neck spotted with black; no pectoral zone, but a narrow black band terminates the pale buff throat..... *paradoxus* ♀, p. 2.
B. Abdomen white.
c. Black vermiculations on the back of the neck and interscapular region very fine and gradually becoming almost invisible on the wing-coverts and scapulars ..... *tibetanus* ♂, p. 5.
d. Black vermiculations on the wing-coverts and scapulars as large and clearly defined as on the upper parts of the body ..... *tibetanus* ♀, p. 5.

1. Syrrhaptes paradoxus.

Heteroclite Grous, *Lath. Gen. Syn.* ii. p. 753 (1783); *id. Gen. Hist.* viii. p. 261 (1823).
Tetrao paradoxa, *Pallas*, *Russ. Reichs*, ii. p. 712, pl. F (1773) [S. desert of Tartary]; *Müll. Suppl. Linn. S. N.* p. 127 (1776); *Pallas*, *Zoogr. Rosso-Asiat.* ii. p. 74 (1811) [Kirghiz Steppes].
Tetrao paradoxus, *Gm. S. N.* i. p. 755 (1788); *Lath. Ind. Orn.* ii. p. 643 (1790); *Bonn. Tabl. Encycl. Méth.* i. p. 205, pl. 93. fig. 1 (1791).
Syrrhaptes paradoxus, *Illiger*, *Prodromus*, p. 243 (1811); *Licht. Verz. Doubl.* p. 66 (1823); *Wagl. Syst. Av.* p. 286 (1827);

Griffith's ed. Cuv. iii. p. 268, pl. (1829); *Gray, List B.* iii. p. 50 (1844); *id. Gen. B.* iii. p. 519, pl. cxxxiv. (1845); *Moore, Ibis*, 1860, p. 105, pl. iv.; *Swinhoe, Ibis*, 1861, p. 341 [Pekin & Tientsin]; *Crommelin, Ned. Tijd. Dierk.* i. p. 219 (1863); *Radde, Reis. Süd. v. Ost-Sibir.* ii. p. 287, pls. xi. & xiv. fig. 3 (1863) [Mongolia]; *Newton, Ibis*, 1864, p. 185 [Irruption of Pallas's Sand-Grouse]; *Salvadori, Ibis*, 1864, p. 228 [Piedmont]; *Fitzinger, Atl. Nat. Vög.* fig. 246 (1864); *Crommelin, Ned. Tijd. Dierk.* iii. p. 239 (1866); *Gould, B. Asia*, vi. pl. 60 (1867); *Degl. & Gerbe, Orn. Eur.* ii. p. 28 (1867); *Gray, List B.* v. p. 5 (1867); *Homeyer, J. f. O.* 1870, p. 170; *Fritsch, Nat. Vög. Europa's*, p. 276 (1870), pl. 32. fig. 12 (1871); *Saunders, Ibis*, 1871, p. 223; *Gray, B. West Scot.* p. 238 (1871); *Fritsch, J. f. O.* 1871, p. 312 [Bohemia]; *Tristram, Ibis*, 1872, p. 334; *Severtz. Turkest. Jevotnie*, p. 68 (1873); *Gould, B. Great Brit.* iv. pl. 11 (1873); *Heuglin, J. f. O.* 1874, p. 399; *Tacz. J. f. O.* 1874, p. 325 [Transbaikal]; *Severtz. J. f. O.* 1875. p. 181 [Turkestan]; *Cordeaux, Ibis*, 1875, p. 184 [Heligoland]; *Dresser, Ibis*, 1876, p. 322 [Turkestan]; *id. B. Europe*, vii. p. 75, pl. 468 (1876); *Schalow, J. f. O.* 1876, p. 26 [Brandenburg]; *Tacz. Bull. Soc. Zool. Fr.* i. p. 241 (1877) [E. Siberia]; *Finsch, Ibis*, 1877, p. 53 [Steppe of Tarik]; *David & Oustalet, Ois. Chine*, p. 389 (1877) [Turkestan, Steppes of Kirghiz & Daouria, Mongolia, Pechili]; *Prjev. Mongolia*, ii. p. 111 (1876); *id. in Rowley's Orn. Misc.* ii. p. 382 (1877) [Mongolia & North of Lake Baikal in summer]; *Elliot, P. Z. S.* 1878, p. 261; *Finsch, Verh. Ges. Wien*, xxix. p. 231 (1880); *Seebohm, Ibis*, 1882, p. 220 [Astrakhan]; *id. Ibis*, 1882, p. 425 [Samarkand]; *Gadow, P. Z. S.* 1882, p. 312; *Saunders, Ibis*, 1883, p. 231; *Homeyer & Tancré, MT. Ver. Wien*, 1883, p. 91; *Radde, Orn. Caucas.* p. 335 (1884); *Saunders, Ibis*, 1884, p. 386 [Pyrenees]; *Zarudn. Bull. Mosc.* lxi. p. 321 (1885) [Transcaspia]; *Giglioli, Avifaun. Ital.* p. 332 (1886); *v. Madarász, Ibis*, 1888, p 375 [Transylvania]; *Collett, Ibis*, 1888, p. 376 [S. Norway]; *Patterson, Ibis*, 1888, p. 376 [Co. Down]; *Blaauw, Ibis*, 1888, p. 377 [Holland]; *Pleske, Mém. Ac. St. Pétersb.* (7) xxxvi. no. 3, p. 47 (1888) [Tschinas, Turkestan]; *Cabanis, J. f. O.* 1888, p. 120; *Kempen, Bull. Soc. Zool. Fr.* xiii. p. 145 (1888), & xiv. p. 18 (1889) [N. France]; *Evans, Zool. Rec.* xxv. pp. 79–86 (1888), xxvi. pp. 69–72 (1889); *Macpherson, Visitation of Pallas's Sand-Grouse to Scotland in* 1888 (1889); *Meyer & Helm, JB. Orn. Mus. Dresden*, 1888–9, *Special Appendix*; *Winge, Vidensk. Medd. Nat. Kjöb.* 1889, p. 57; *Saunders, Ill. Man. Brit. B.* p. 475 (1889); *Giglioli, Avifaun. Ital.* pt. i. p. 512 (1889); *Reich. J. f. O.* 1889, p. 1 [Germany]; *Tschusi zu Schmidhoffen, Mitth. Nat. Ver. Steiermark, Separat-Abdruck*, 1889; *Schalow, J. f. O.* 1890, p. 14; *Newton, Ibis*, 1890, p. 207, pl. vii.; *Blaauw, Ibis*, 1890, p. 465 [Texel Is.]; *Sharpe, Second York. Miss., Aves*, p. 120 (1891) [E. of Kizil].

Nematura paradoxa, *Fisch. Mém. Soc. Nat. Mosc.* iii. p. 271 (1812).

Sirrhaptes paradoxus, *Less. Traité Orn.* p. 518 (1831).

Tetrao arenaria, *Pallas, Zoogr. Rosso-Asiat.* ii. pl. liii. (1811).

Heteroclitus tartaricus, *Vieill. N. Dict. d'Hist. Nat.* xiv. p. 453 (1817).

Syrrhaptes pallasii, *Temm. Pig. et Gall.* iii. pp. 282, 716 (1815); *id. Pl. Col.* v. pl. 30 [no. 95] (1824); *Steph. Shaw's Gen. Zool.* xiv. p. 304, pl. 37 (1826); *Schinz, Nat. Abbild. Vög.* p. 282 (1833); *Jard. Nat. Lib., Orn.* iv. p. 182, pl. xxiii. (1834); *Kaup, Das Thierreich*, ii. pt. 1, p. 63, fig. (1836).

Syrrhaptes heteroclita, *Vieill. Gal. Ois.* iii. p. 64, pl. ccxxii. (1825).
Syrrhaptes heteroclitus, *Montessus, Rev. et Mag. Zool.* 1863, pp. 358, 390, 393, pl. 24.
Sirraptes fischeri, *Karelin, Bull. Mosc.* xiii. p. 495 (1840).

Adult male. Forehead, superciliaries, cheeks, and nape yellowish grey, shading into dove-grey on the back of the head and sides of the neck; chin whitish, throat and continuation of eye-stripe rust or yellowish rust. Nape, chest, and breast buffy grey, the two latter separated by a band of white-tipped feathers, each with a narrow black subterminal band, belly black. Back, rump, and scapulars buff, barred with black; the upper tail-coverts are also buff, margined internally with blackish grey. Wing-coverts buff. Most of the feathers of the shoulder with black extremities, and some of the median coverts ornamented with round black spots near the extremity of the outer web. Axillaries white, tipped with black. Primaries grey, shading into black on the innermost three, the first much the longest and produced into a filament and with the outer web black, the remainder margined with buff; secondaries buff, with the terminal two-thirds of the outer web black nearly to the margin; greater primary-coverts like the secondaries, but the black on the outer web extends to the base of the feathers, and leaves a wide buff margin; greater secondary-coverts buff, with a dark chestnut patch towards the extremity of the outer web. Legs, feet, and vent white, under tail-coverts white barred with black; middle pair of tail-feathers buff, irregularly marked with blackish grey, much longer than the rest, and produced into long black filaments; rest of tail-feathers blackish grey, toothed on both webs with vinaceous buff, and tipped with white. Total length 14·6 inches, wing 9·1, tail 7, tarsus 0·8.

Adult female. Resembles the male; but the feathers of the top of the head, nape, and ear-coverts have black shaft-streaks, the throat and continuation of the eye-stripe are buff-yellow or yellow, and the former is separated from the chest by a blackish-brown line. No band of black and white feathers divides the chest and breast; the sides and back of the neck, sides of the chest, and the lesser and median wing-coverts are ornamented with subterminal round black spots, and the barring of the back is less regular. Total length 12·8 inches, wing 8, tail 5·5, tarsus 0·8.

Immature males and females resemble the female adult, but have all the neck and chest spotted with irregularly shaped blackish-brown marks, and the black bars on the interscapular region and the round subterminal spots on the lesser and median wing-coverts much less regular, being broken up into variously shaped marks; the buff margins and brownish-black inner parts of the inner primaries, greater primary-coverts, and secondaries so clearly defined in the adult run into one another; and the filiform ends to the first primaries and centre pair of tail-feathers are not developed.

For description and figure of nestling, see Newton, Ibis, 1890, p. 210, pl. vii.

Hab. Central Asia; extending to Pechi-li, N. China in the east,

and the Kirghiz Steppes in the west, north beyond Lake Baikal, and south throughout Mongolia and Turkestan.

Periodically great numbers visit Europe.

a, b. ♂ ♀ imm. st.	North Asia.	
c. ♀ ad. sk.	Altai.	Gould Coll.
d, e. ♂ ad. st.; ♀ imm. sk.	Kirghiz Steppes.	Purchased.
f, g. ♂ ad. et imm. sk.	Turkestan.	Tweeddale Coll.
h, i. ♂ ♀ ad. sk.	Lewes, Sussex, Jan.	Purchased.
k. ♂ ad. st.	Norfolk, June.	F. Bond, Esq. [P.].
l. ♀ ad. sk.	King's Lynn, Oct.	Victor Ames, Esq. [P.].
m. ♀ ad. st.	Cambridge, June.	F. Bond, Esq. [P.].
n. ♂ ad. sk.	Easington, Lincolnshire, Oct.	Dr. H. B. Hewetson [P.].
o–r. ♂ ♀ ad. st.	Mouth of the Humber.	Dr. H. B. Hewetson [P.].
s. ♀ ad. sk.	Island of Tiree, S. Hebrides, Aug.	Lt.-Col. L. H. Irby [P.].
t. ♂ ad. sk.	No locality.	
u. ♂ ad. sk.	No locality.	Gould Coll.
v. Skeleton.	Near Pekin.	R. Swinhoe, Esq. [C.].
w. Skeleton.	No locality.	Salvin-Godman Coll.
x. ♂ sternum and shoulder-girdle.	Cambridge, June.	Mr. S. P. Saville [P.].

2. Syrrhaptes tibetanus.

Syrrhaptes tibetanus, *Gould, P. Z. S.* 1850, p. 92 [Ladak]; *id. B. Asia*, vi. pl. 61 (1850); *Adams, P. Z. S.* 1858, p. 502, & 1859, p. 186; *Gray, List B.* v. p. 5 (1867); *Hend. & Hume, Lahore to Yarkand*, p. 279 (1873) [Karakash Valley]; *Prjev. Mongolia*, ii. p. 14 (1876); *id. in Rowley's Orn. Misc.* ii. p. 384 (1877) [Steppes of Koko-Nor & N. Thibet]; *Elliot, P. Z. S.* 1878, p. 263; *Hume, Str. F.* vii. pp. 162, 425 (1878); *Hume & Marshall, Game Birds Ind.* i. p. 43, pl. (1879) [Sutlej Valley]; *Severtz. Ibis*, 1883, p. 71 [Pamir]; *Pleske, Mém. Ac. St. Pétersb.* (7) xxxvi. no. 3, p. 47 (1888); *Sharpe, Second Yark. Miss., Aves*, p. 119 (1891) [Chagra, Gogra].

Adult male. Forehead, lores, cheeks, and chin white, with black shafts; sides of the head, throat, and a band round the nape buff-yellow. Top of the head black, barred with white. Chest, sides, and back of the neck white, with narrow, wavy, transverse bars of black, the ground-colour gradually shading into vinaceous on the upper back, while the black bars become mere vermiculations. Wing-coverts, scapulars, and tertiaries vinaceous buff, minutely vermiculated with black, the inner webs of the scapulars with large subterminal black blotches, nearly hidden in fresh-moulted specimens, but forming a large triangular interscapular patch in worn specimens; lower back, rump, and upper tail-coverts whitish, somewhat coarsely vermiculated with black. Primaries, secondaries, and greater wing-coverts black; the inner primaries with a somewhat extensive terminal patch of whitish buff, while the secondaries have more or less of the outer web (less in the inner and more in the outer) similarly coloured to the tertiaries. Axillaries black. Upper breast greyish white; belly, flanks, legs, and feet white; under

tail-coverts chestnut, tipped with white, and widely barred with black. Centre pair of tail-feathers like the upper tail-coverts, and produced into long blackish-grey filaments: rest of the tail-feathers, of which the outer pair are much the shortest, similar to the under tail-coverts. Total length 16 inches, wing 9·8, tail 7·9, tarsus 1.

Adult female. Differs from the male in having the whole of the upper parts irregularly barred with black; most marked on the elongate tertiaries; the upper breast, as well as the chest, barred with black, and the centre pair of tail-feathers less developed. Total length 15 inches, wing 9·7, tail 7·4, tarsus 1.

A *quite immature bird* resembles the adult female, but has only a trace of yellow about the ear-coverts, and the barring on the upper parts of the body is coarser and more irregular.

A *nestling* from Thibet closely resembles in every particular the figure of *S. paradoxus* given in the 'Ibis,' already mentioned.

Hab. Thibet; extending northwards to the steppes of Koko-Nor, west to the Pamir, and south to Ladak and the upper portions of the Sutlej Valley.

a–c. ♂ ad. sk.	Kashgar (*Bellew*).	India Museum [P.].
d, e. ♂ ♀ ad. sk.	Pamir, May (*Biddulph*).	Hume Coll.
f. ♂ ad. sk.	Gulcha, Pamir.	St. George Littledale, Esq. [P.].
g. ♀ ad. sk.	Karakoram (*Bellew*).	India Museum [P.].
h, i. ♂ ♀ ad. et imm. sk.	Gogra, Aug. (*F. Stoliczka*).	India Museum [P.].
k–t. ♂ ad. sk.	Ladak.	Hume Coll.
u, v. ♂ ♀ ad. sk.	Masinik Pass, Oct. & Dec. (*Henderson*).	Hume Coll.
w. ♂ ad. sk.	Thibet, Feb.	Tweeddale Coll.
x–f'. ♂ ♀ ad. sk.	Thibet, April, May, Sept., & Nov. (*Mandelli*).	Hume Coll.
g'. ♂ ad. sk.	Thibet.	Lord Gifford [P.].
h'–k'. ♀ ad. sk. & juv. et pull. st.	Thibet.	Major Charlton [P.].

2. PTEROCLURUS.

Type.

Œnas, *Vieill.* (*nec Latr. Col.* 1802) *Analyse*, p. 52 (1816). P. alchata.
Pteroclurus, *Bonap. Compt. Rend.* xlii. p. 880 (1856).... P. alchata.
Pterygocius, *Heine, Nomencl. Mus. Hein.* p. 288 (1890).. P. alchata.

Tarsi feathered; toes naked; small hallux always present; two central tail-feathers elongate, and more or less produced into filaments.

Range. Africa, S. Europe, and S.W. Asia.

Key to the Species.

A. Lower breast and belly pure white.
  a. Throat black.
    a'. Subterminal bars of wing-coverts white .. *alchata* ♂, p. 7.
    b'. Subterminal bars of wing-coverts yellow.. *pyrenaicus* ♂, p. 9.
  b. Throat white.
    c'. Subterminal bars of wing-coverts white .. *alchata* ♀, p. 7.
    d'. Subterminal bars of wing-coverts yellow.. *pyrenaicus* ♀, p. 9.

B. Lower breast and belly not pure white.
  c. Shaft of first primary white.
    e'. A white and chestnut pectoral zone, belly uniform ..... *namaqua* ♂, p. 10.
    f'. No pectoral zone, belly transversely barred ..... *namaqua* ♀, p. 10.
  d. Shaft of first primary dark.
    g'. Chest and upper breast immaculate.
      a''. A narrow white and black pectoral zone ..... *exustus* ♂, p. 12.
      b''. No pectoral zone ..... *senegallus* ♂, p. 14.
    h'. Chest and upper breast spotted.
      c''. Spots on chest and upper breast blotchy, and terminated by two or three transverse rows of bars; back transversely barred ..... *exustus* ♀, p. 12.
      d''. Chest and upper parts covered with round black spots ..... *senegallus* ♀, p. 14.

1. Pteroclurus alchata.

Pintailed Grous, *Lath. Gen. Syn.* ii. p. 748 (1783); *id. Gen. Hist.* viii. p. 250 (1823).

Tetrao alchata, *Linn. S. N.* i. p. 276 (1766); *Gm. S. N.* i. p. 754 (1788); *Lath. Ind. Orn.* ii. p. 641 (1790); *Bonn. Tabl. Encycl. Méth.* i. p. 203, pl. 92. fig. 3 (1791).

Pterocles alchata, *Temminck, Man. d'Orn.* p. 302 (1815); *Steph. Shaw's Gen. Zool.* xi. p. 311 (1819); *Licht. Verz. Doubl.* p. 64 (1823); *Kaup, Das Theirreich*, ii. pt. 1, p. 61, fig. (1836); *Gray, List of B.* pt. iii. *Gall.* p. 48 (1844); *id. Gen. B.* iii. p. 518 (1845); *Blyth, Cat. B. As. Soc.* p. 249 (1849); *Jerdon, B. Ind.* ii. p. 500 (1863); *Gray, List B.* v. p. 4 (1867); *Fritsch, Nat. Vög. Europa's*, p. 274 (1870), p. 632, fig. 10 (1871); *Severtz. Turkest. Jevotnie*, p. 68 (1873); *Hume, S. F.* i. p. 221 (1873) [Sindh]; *Severtz. J. f. O.* 1875, p. 181 [Turkestan]; *Blewitt, S. F.* iii. p. 268 (1875) [Gurgaon Dt.]; *Blanford, E. Persia*, ii. p. 271 (1876) [Persia]; *Dresser, Ibis*, 1876, p. 322 [Turkestan]; *Hume, S. F.* vii. p. 161 (1878) [W. Rajpootana, Punjab, W. Cashmere]; *Elliot, P. Z. S.* 1878, p. 250; *Hume & Marshall, Game B. Ind.* i. p. 77, pl. (1878); *Seebohm, P. Z. S.* 1879, p. 764 [Atreck Valley]; *Butler, Cat. B. Sind, etc.* p. 53 (1879); *Barnes, Str. F.* ix. p. 458 (1880) [S. Afghanistan]; *Swinhoe, Ibis*, 1882, p. 118 [S. Afghanistan]; *Seebohm, Ibis*, 1883, p. 25 [Caucasus]; *Radde, Orn. Caucas.* p. 333 (1884); *Tristr. Palest.* p. 122 (1884); *Scully, M. & B. N. Afghan.* p. 86 (1887); *St. John, Ibis*, 1889, p. 174 [S. Afghanistan].

Tetrao caudacutus, *S. G. Gmel. Reise*, iii. p. 93, pl. xviii. (1774).

Tetrao chata, *Pallas, Zoogr. Rosso-Asiat.* ii. p. 73 (1811) [Bokhara].

Pterocles chata, *Démid. Voy. Russ. Mérid.* iii. p. 222 (1840) [Caucasus]; *Bogd. B. Caucasus*, p. 126 (1879).

Pterocles arenarius, *Guérin-Méneville* (*nec Pall.*), *Icon. Règ. Anim., Ois.* p. 26, pl. 44. fig. 3 (1829–38).

Pterocles caspius, *Ménétr. Cat. Rais. de Zool.* p. 47 (1832).

Pterocles sewerzowi, *Bogdanow, Mél. Biol.* xi. p. 51 (1881); *id. Bull. Ac. Sci. St. Pétersb.* xxvii. p. 168 (1881); *id. J. f. O.* 1882, p. 115 [Turkestan, Transcaucasus, N. Persia]; *Zaroudn. Bull. Mosc.* lxi. p. 321 (1885) [Transcaspia]; *Pleske, Mém. Ac. St. Pétersb.* (7) xxxvi. no. 3, p. 46 (1888) [Tschinas, Turkestan].

Pterocles severtzovi, *Zaroudn. Bull. Mosc.* n. s. iii. p. 810 (1890).

Adult male. Top of the head greyish ochre; chin and throat black, as also a line commencing behind the eye and extending along the side of the head; rest of the head bright rufous buff, gradually shading into ochre on the neck. Upper back and scapulars dull olive-ochre, each feather margined with greyish and most of the scapulars with a subterminal patch of ochre. Lower back, rump, and upper tail-coverts yellowish buff barred with black. Chest pale rufous, separated from the neck above and the white breast and rest of underparts by two narrow black lines. Primaries and greater primary-coverts grey, the outer web of the first primary and the terminal part of the inner webs of the five inner primaries blackish; the latter are also margined at the extremity with white. Secondaries white, the external half of the outer web and last third of the inner web black, margined with white; the inner secondary, median, and all the lesser wing-coverts white, with the greater part of the outer web and in the two latter the terminal part also of the inner web bright chestnut, with a narrow submarginal white and black band. Outer secondary and median coverts have the ends yellowish buff, margined by a black band. Shoulders grey. Axillaries pure white. Tail-feathers (16) blackish grey, mixed with ochre and barred with pale rufous; the centre pair produced into long blackish filaments, and the remainder tipped with white. Total length 14·8 inches, wing 8·4, tail 6·3, tarsus 1·1.

In *nearly mature* birds many of the feathers of the top of the head and a few of the long scapulars and feathers of the back are yellowish buff, barred with black, and the black throat-patch has still a few white feathers mixed with the black.

In a *younger bird* these differences are yet more marked, and none of the yellow subterminal blotches characteristic of the scapulars of the adult are to be seen, while the throat-patch is more white than black, and each feather of the sides of the head and neck has a subterminal black spot.

In *quite young male* and *female* specimens the plumage resembles that of the immature female, but the whole of the head, neck, and chest are pale rufous buff barred and marked with black, and the extremities of the primaries and primary-coverts are as usual tipped with white.

Adult female. The top of the head, nape, back, rump, and upper tail-coverts yellowish buff barred with black. Chin and throat white, rest of the face as in the adult male but paler; the front and sides of the neck are covered by a wide black band edged with buff, succeeded by a grey band edged with black. The chest and rest of the underparts resemble those of the male, but the former is paler. The scapulars, outer secondary, and median coverts are barred like the dorsal feathers; but in the former each feather is terminated by a somewhat wide band of slate-grey followed by an equally wide band of tawny-yellow edged with black, while in the two latter the subterminal band is white instead of slate. The inner secondary and median coverts are white, margined with black along the outer web; and the rest of the

median and the least wing-coverts are pale rufous with the extremity black. The rest of the plumage resembles that of the adult male. Total length 13·5 inches, wing 7·8, tail 5·5, tarsus 1.

In *immature females* the scapulars have the subterminal bands black instead of grey, and the terminal band pale buff, not brighter than the rest of the ground-colour of the back; the black band on the upper part of the neck is represented by a subterminal spot at the end of each feather, and the sides of the face and neck are also spotted.

Hab. S.W. Asia; ranging from Palestine to North-western India, and extending southwards to Bushire at the head of the Persian Gulf, and probably to Arabia, and northwards to Asia Minor, Transcaucasus, and Turkestan.

a. ♂ imm. sk.	N. of Jacobabad, Nov.	Hume Coll.
b. ♀ imm. sk.	Naraina, Jaipur, Dec. (*T. W. Bartlett*).	Hume Coll.
c, *d*. ♂ imm.; ♀ ad. sk.	Gurgaon Dist., Feb. (*W. N. Chill*).	Hume Coll.
e. ♂ imm. sk.	Delhi, Dec. (*F. Blewitt*).	Hume Coll.
f–*g*'. ♂ ♀ ad. et imm. sk.	Murdan, Jan., Feb., March, Dec. (*J. R. Johnson*).	Hume Coll.
h. ♀ ad. sk.	Afghanistan (*W. Griffith*).	India Museum.
i', *k*'. ♂ ♀ ad. st.	Bagdad.	Sir K. Loftus [P.].
l', *m*'. ♀ ad. sk.	Asia.	Purchased.
n', *o*'. Skeletons.		Purchased.

Subsp. *a*. Pteroclurus pyrenaicus.

The Little Pin-tailed Grous, *Edw. Glean. Nat. Hist.* v. p. 84, pl. 249 (1758).

Gelinote des Pyrénées, *Daubent. Pl. Enl.* ii. nos. 105 (♂) & 106 (♀).

Bonasa pyrenaica, *Briss. Orn.* i. p. 195, pl. xix. (1760).

Pterocles pyrenaicus, *Seebohm, Ibis*, 1883, p. 26.

Pterocles setarius, *Temm. Pig. et Gall.* iii. pp. 256, 714 (1815) [nec Arabia]; *id. Man. d'Orn.* p. 301 (1815); *id. Man. d'Orn.* p. 478 (1820); *Wagl. Syst. Av.* p. 282 (1827); *Wern. Atl. Orn. d'Eur.* ord. 10, pl. 14 (1828); *Schinz, Nat. Abbild. Vög.* p. 281 (1833); *Gould, B. Europe*, iv. p. 258, pl. (1837) [nec Persia]; *Crespon, Orn. Gard*, p. 326 (1840); *Companyo, Hist. Nat. Pyrénées-Orient.* iii. p. 200 (1863).

Œnas cata, *Vieill. N. Dict. d'Hist. Nat.* xii. p. 418 (1817) [nec Persia]; *Roux, Orn. Prov.* ii. p. 20, pls. 248, 249, 381 (1830).

Pterocles alchata, *Bonap.* (*nec Linn.*) *Icon. Fauna Italica*, i. p. 143, pl. 40 (1840); *Degl. Orn. Europ.* ii. p. 18 (1849); *Salvin, Ibis*, 1859, p. 352 [E. Atlas]; *Powys, Ibis*, 1860, p. 239 [nr. Sicily]; *Linderm. Vög. Griechenl.* p. 122 (1860); *Tristram, Ibis*, 1860, p. 70 [N. Africa]; *Sperling, Ibis*, 1864, p. 284; *Wright, Ibis*, 1864, p. 139 [Malta]; *Fitzinger, Atl. Nat. Vög.* fig. 247 (1864); *Lilford, Ibis*, 1865, p. 167, & 1866, p. 379 [Spain]; *Drake, Ibis*, 1867, p. 428 [E. Morocco]; *Degl. & Gerbe, Orn. Europ.* ii. p. 23 (1867); *Bree, B. Eur.* iii. p. 221, pl. (1867); *Smith, Ibis*, 1868, p. 451 [Portugal]; *Saunders, Ibis*, 1871, p. 223 [Andalucia]; *Heugl. Orn. N.O.-Afr.* iii. p. 853 (1873); *Dresser, B. Europe*, vii. p. 67,

pl. 467 (1874); *Irby, Orn. Gibraltar*, p. 135 (1875); *Müller, J. f. O.* 1879, p. 390 [Cyprus]; *Giglioli, Ibis*, 1881, p. 205 [Italy]; *Chapman, Ibis*, 1884, p. 84 [Spain]; *Giglioli, Avifaun. Ital.* p. 331 (1886); *Carazzi, Boll. Soc. Nat. Napoli*, i. fasc. i. (1887); *Tait, Ibis*, 1887, p. 380 [Portugal]; *Giglioli, Avifaun. Ital.* pt. i. p. 511 (1889); *Lilford, Ibis*, 1889, p. 333 [Cyprus].

Pteroclurus alchata, *Levaill. Explor. Algér.* p. 233 (1867); *Olphe-Galliard, Faun. Orn. Europe Occ.* fasc. xxxix. p. 61 (1886).

Syrrhaptes paradoxus, *Saunders, Ibis*, 1869, p. 397.

South European and North African birds differ slightly from the true Asiatic *P. alchata* in being richer in colour. In both sexes the chest is chestnut instead of pale rufous, and in the male the submarginal bars of the chestnut inner secondary and median wing-coverts are buff instead of white; while in the same feathers in the female the black marginal band is separated from the white part by a wide buff band. Otherwise the plumage is the same.

Hab. Southern Europe and North Africa, extending as far east as Cyprus.

a. ♂ ad. sk.	Near Toulon (*M. Gerbe*).	Riocour Coll.
b–d. ♂ ♀ ad. et ♀ juv. sk.	Seville, April, May, Oct. (*H. Saunders*).	Tweeddale Coll.
e–g. ♂ ♀ ad. sk.	Spain.	W. Owen, Esq., and Capt. Cook [P.].
h–i. ♂ ♀ ad. sk.	Spain (*E. C. Taylor*).	Shelley Coll.
k, l. ? Pull. st.	Tunis.	Purchased.
m. ♂ ad. st.		Hardwicke Bequest.
n. Skeleton.	Africa.	Purchased.
o. Skeleton.	France.	

2. Pteroclurus namaqua.

Namaqua Grous, *Lath. Gen. Syn.* ii. p. 750 (1783); *id. Gen. Hist.* viii. p. 251 (1823).

Tetrao Namaqua, *Gm. S. N.* i. p. 754 (1788); *Lath. Ind. Orn.* ii. p. 642 (1790); *Bonn. Tabl. Encycl. Méth.* i. p. 204 (1791).

Œnas namaqua, *Vieill. N. Dict. d'Hist. Nat.* xii. p. 422 (1817).

Pterocles namaqua, *Gray, List B.* iii. p. 49 (1844); *id. Gen. B.* iii. p. 518 (1845); *id. List B.* v. p. 4 (1867); *Elliot, P. Z. S.* 1878, p. 252; *Bocage, Orn. Angola*, p. 396 (1881) [S. of Mossamedes]; *Holub u. Pelz. Orn. Südafr.* p. 182 (1882) [Orange & Vaal Rs.]; *Ayres, Ibis*, 1886, p. 292 [Limpopo R.]; *Symonds, Ibis*, 1887, p. 333 [Kroonstad, Orange Free State].

Pteroclurus namaqua, *Gurney's ed. Andersson's B. Damaraland*, p. 242 (1872) [Damaraland].

Pterocles tachypetes, *Temm. Pig. et Gall.* iii. pp. 274, 715 (1815); *Steph. Shaw's Gen. Zool.* xi. p. 313 (1819); *Wagl. Syst. Av.* p. 282 (1827); *Layard, B. S. Afr.* p. 277 (1867) [Namaqualand]; *id. Ibis*, 1869, p. 75; *Ayres, Ibis*, 1871, p. 262 [Transvaal].

Pterocles simplex, *Roux, Less. Traité Orn.* p. 517 (1831).

Adult male. Top of the head, nape, and neck ochraceous buff, shading into vinaceous buff on the lower part of the chest, and into orange-yellow on the throat and chin. Upper back, rump, and upper tail-coverts dull olive-brown, each feather with a buff-grey

subterminal blotch. Lesser, median, and secondary wing-coverts and scapulars dark brown, with a subterminal buff or buff-and-white blotch. Outer secondaries buffy brown. Primaries, primary-coverts, and rest of secondaries black, the first two primaries with white shafts, and the five inner ones and the inner secondaries tipped and partially margined on the inner web with white. Axillaries blackish brown. A white and dark chestnut pectoral band separates the chest from the brown breast, which shades gradually into buff on the belly, flanks, and under tail-coverts. Feathers on front of tarsi white. Tail composed of 16 feathers: centre pair like the upper tail-coverts and produced into long black filaments; outer pairs dark brown tipped with buff. Total length 12 inches, wing 6·6, tail 4·6, tarsus 0·85.

Adult female. Differs from the male in having the lores, top of the head, and upper back pale chestnut, shading into pale yellow on the sides of the head, throat, and nape, each feather with a black shaft-stripe, reduced to a subterminal spot on those of the throat, while on the upper back and chest it gives off lateral bars and terminates in a rounded blotch, giving those parts a somewhat spotted appearance; lower back, rump, and upper tail-coverts resemble the upper back, but the ground-colour is mixed with buff. Secondary, median and lesser wing-coverts, scapulars, and outer secondaries pale chestnut-buff, each feather with a black shaft-stripe giving off lateral bars and tipped with buff or buff and reddish brown. Breast, belly, and flanks buff, barred with black; tail-feathers black, barred on the outer part of both webs with chestnut, the centre pair produced into moderate black filaments, rest tipped with buffy white. Total length 10·5 inches, wing 6·2, tail 4·3, tarsus 0·8.

Young male resembles the adult female, but the top of the head and upper back are more rufous in tone and barred with distinct narrow bars of brownish black, less regular on the head: the chest is buff, irregularly marked with dusky grey; the throat, breast, and belly resemble those of the adult male, but the throat is paler and the breast more rufous. The ends of the primaries are, as usual, tipped with buff vermiculated with black, and the centre pair of tail-feathers are not produced into filaments.

Hab. South Africa; ranging eastwards to the Transvaal, south to the Great Karroo, and west to Damaraland and Benguela.

a, b. ♂ juv.; ♀ ad. sk.	Potchefstroom, Aug., Nov. (*T. Ayres*).	J. H. Gurney, Esq. [P.].
c. ♂ ad. sk.	Kroonstad, Sept.	J. H. Gurney, Esq. [P.].
d–f. ♂ ♀ ad. sk.	Kimberley, June.	J. E. Harting, Esq. [P.].
g, h. ♂ ad. et juv. sk.	S. Africa.	J. Rocke, Esq. [P.].
i. ♀ ad. sk.	S. Africa.	Major-Gen. Hardwicke [P.].
k. ♀ ad. sk.	S. Africa.	Gould Coll.
l, m. ♂ ♀ ad. sk.	Cape.	Sir A. Smith [P.].
n, o. ♂ ♀ ad. sk.	Benguela.	Monteiro Coll.
p. ♂ ad. sk.	No locality.	Gould Coll.
q. Imm. sk.	No locality.	

3. Pteroclurus exustus.

Bahtah Grous, *Lath. Gen. Hist.* viii. p. 258 (1823).
Pterocles senegalensis, *Licht. Verz. Doubl.* p. 64 (1823).
Pterocles exustus, *Temm. Pl. Col.* v. pls. 28, 29 [nos. 354 & 360] (1825); *Wagl. Syst. Av.* p. 284 (1827); *Griffith's ed. Cuv.* iii. p. 258, pl. (1829); *Hodgson, Icon. ined. in Brit. Mus., Gallinæ* (no. 783); *id. Gray's Zool. Misc.* p. 85 (1844) [Nepal]; *Gray, List B.* iii. p. 49 (1844); *id. Gen. B.* iii. p. 519 (1845); *Rüppell, Vög. N.O.-Afr.* p. 106 (1845) [N. Africa, Abyssinia, Arabia]; *Blyth, Cat. B. Mus. As. Soc.* p. 249 (1849); *Gould, B. Asia,* vi. pl. 64 (1850); *Hartl. Orn. W.-Afr.* p. 205 (1857) [Senegal]; *Irby, Ibis,* 1861, p. 235 [Oudh]; *Jerd. B. Ind.* iii. p. 502 (1863); *Adams, Ibis,* 1864, p. 27 [Upper Egypt]; *Allen, Ibis,* 1864, p. 240 [Upper & Lower Egypt]; *Taylor, Ibis,* 1867, p. 67 [Egypt]; *Gray, List B.* v. p. 4 (1867); *Beavan, Ibis,* 1868, p. 378 [Umballah, Gwalior]; *Finsch, Tr. Z. S.* vii. p. 291 (1870) [Mai Wallet]; *Blanford, Geol. & Zool. Abyss.* p. 419 (1870) [near the coast]; *Shelley, Ibis,* 1871, p. 143 [Egypt]; *id. B. Egypt,* p. 218 (1872); *Antin. e Salvad. Cat. Ucc.* p. 132 (1873) [Bogos, Tunis]; *Hume, S. F.* i. p. 225 (1873) [Sindh]; *Adam, S. F.* i. p. 392 (1873) [Sambhur]; *Lloyd, Ibis,* 1873, p. 415 [Kattiawar]; *Heuglin, Orn. N.O.-Afr.* iii. p. 855 (1873); *King, S. F.* ii. p. 458 (1874) [Calcutta]; *Fairbank, S. F.* iv. p. 262 (1876) [Khandala]; *Finsch, Ibis,* 1877, p. 53 [Steppe of Tarik]; *Hume & Marshall, Game B. Ind.* i. p. 69, pl. (1878); *Elliot, P. Z. S.* 1878, p. 248; *Hume, S. F.* vii. p. 161 (1878); *Ball, S. F.* vii. p. 225 (1878) [Ganges to Godaveri]; *Doig, S. F.* viii. p. 371 (1879) [E. Narra]; *McInroy, S. F.* viii. p. 492 (1879) [Mysore]; *Taylor, Ibis,* 1879, p. 50; *Butler, Cat. B. Sind, etc.* p. 53 (1879); *id. Cat. B. S. Bombay,* p. 67 (1880); *id. S. F.* ix. p. 421 (1880) [Deccan & S. Mahratta]; *Reid, S. F.* x. p. 61 (1881) [Lucknow]; *Davidson, S. F.* x. p. 316 (1882) [Khandeish]; *Tristr. Palest.* p. 122 (1884); *Swinhoe & Barnes, Ibis,* 1885, p. 131 [Central India]; *Fischer, Zeit. ges. Orn.* i. p. 379 (1884) [Pangani, Chaga Dist.]; *id. J. f. O.* 1885, p. 117 [E. Africa]; *Verbury, Ibis,* 1886, p. 19 [Aden]; *Salvad. Ann. Mus. Civ. Genov.* xxvi. p. 306 (1888) [Shoa]; *Shelley, Ibis,* 1888, p. 294 [Useri River]; *id. P. Z. S.* 1889, p. 370 [Useri River]; *Meyer, Vog.-Skel.* pt. xiv. pl. cxxxvi. fig. 1 (1890).
Pteroclurus exustus, *Ball, S. F.* ii. p. 426 (1874) [Chota Nagpur].
Pteroles ellioti, *Bogdanow, Mél. Biol.* xi. p. 54 (1881) [Abyssinia]; *id. Bull. Ac. Sc. St. Pétersb.* xxvii. p. 167 (1881); *id. J. f. O.* 1882, p. 114.

Adult male. Lores, cheeks, throat, and nape dull ochre, shading into vinaceous buff on the chest; top of the head, upper back, rump, and upper tail-coverts isabelline brown. Scapulars and outer secondaries darker, shading into buff at the extremity, and terminated by a pale brown bar. Lesser and median wing-coverts yellowish buff, terminated by a rich brown band, some of the latter frequently further ornamented by a subterminal white spot. Primaries, primary-coverts, and inner secondaries black, the five inner primaries tipped with white. Secondary coverts yellowish buff. Axillaries blackish brown. A narrow black band edged with white separates the chest from the yellowish-buff upper breast, which shades into deep chestnut-brown on the lower breast, flanks, and

belly. Tarsi and under tail-coverts whitish buff. Centre pair of tail-feathers like the scapulars and produced into long black filaments, rest of the tail-feathers dark brown tipped with buff. Total length 13 inches, wing 7·1, tail 5·3, tarsus 0·9.

Adult female. Differs from the male in having a broad blackish-brown bar down the middle of each feather of the top of the head, neck, upper back, and chest, on the two latter the extremity of this bar is swollen, giving these parts a spotted appearance. The back, rump, and upper tail-coverts are vinaceous or yellowish buff, thickly barred with black. Scapulars, lesser and median wing-coverts the same, but with yellowish-buff ends tipped with brown. Upper breast whitish or yellowish buff; belly and flanks blackish brown, closely barred with rufous buff. Tail-feathers like those of the back, the centre pair being produced into moderately long black filaments, while the remainder are tipped with yellowish white. Total length 10 inches, wing 7, tail 3·6, tarsus 0·8.

An immature female differs from the adult in having the outer primaries and the inner secondaries tipped with buff, the former vermiculated with black, the upper breast spotted with blackish brown, and the centre pair of tail-feathers not produced into filaments.

In a *much younger* example the extremities of the primaries, outer secondaries, scapulars, and many of the median wing-coverts are rufous buff, vermiculated with black and edged externally with a narrow black and buff margin.

In a *still younger* specimen, partially in the down, the feathers of the back and wing-coverts are rufous buff, vermiculated with black and margined by a narrow black and buff edging.

Some specimens from N.E. Africa (*P. ellioti*, Bogdanow) appear somewhat richer in colouring than the majority of Indian birds; but this is partly caused by orange pigment with which the feathers are stained, and also partly due to their being all freshly moulted.

Hab. W., N., and E. Africa and S.W. Asia; ranging in the west to Senegal, in the east over the greater part of India, in the north to Palestine and Central Asia, and in the south to the Pangani River, E. Africa.

a. ♀ ad. st.	India.	Purchased.
b. ♀ ad. sk.	Sind.	Hume Coll.
c. ♂ ad. sk.	Mehur, N. Sind, Jan. (*A. O. H.*).	Hume Coll.
d. ♂ ad. sk.	Cutch.	Hume Coll.
e–i. ♂ ♀ ad. et juv. sk.	Mhow, March, June, Dec.	Col. Swinhoe [P.].
k. ♂ ad. sk.	Deesa, April (*E. A. Butler*).	Hume Coll.
l. ♀ ad. sk.	Kakalow, 15 miles from Jhodpur, Jan.	Hume Coll.
m. ♀ ad. sk.	Bundelkund, Jan.	Hume Coll.
n–s. ♂ ♀ ad. sk.	Sambhur, Dec. (*R. M. Adam*).	Hume Coll.
t. ♂ ad. sk.	Ludhiana (*W. Griffith*).	India Museum [P.].
u–y. ♂ ♀ ad. sk.	Hissar, Sept., Oct. (*C. H. T. Marshall*).	Hume Coll.

z–*a'*. ♂ ad. sk.	Hissar, Dec. (*J. Biddulph*).	Hume and Tweeddale Colls.
b', *c'*. ♂ ♀ ad. sk.	Rohtuk Dist., Dec. (*A.O.H.*).	Hume Coll.
d'–*f'*. ♂ ♀ ad. sk.	Gurgaon Dist., April, May (*W. N. Chill*).	Hume Coll.
g'. ♀ ad. sk.	Sirsa Dist., Dec. (*A. O. H.*).	Hume Coll.
h'–*k'*. ♂ ♀ ad. sk.	Umballah, Nov., Dec. (*R. C. Beavan and Dr. Scott*).	Tweeddale Coll.
l'. ♂ ad. sk.	N.W. Provinces.	Tweeddale Coll.
m'–*p'*. ♂ ♀ ad. sk.	Etawah, Feb., April, Nov.	Hume Coll.
q', *r'*. ♂ ♀ ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
s'. ♀ ad. sk.	Behar.	B. H. Hodgson, Esq. [P.].
t'. Juv. sk.	Raipur.	Hume Coll.
u', *v'*. ♂ ♀ ad. sk.	Kamptee.	Dr. R. B. Hinde [P.].
w'–*z'*. ♂ ♀ ad. sk.	Saugor (*W. T. Hooper*).	Hume Coll. and India Museum [P.].
a''–*d''*. ♂ ♀ ad. sk.	Deccan (*Sykes*).	India Museum [P.].
e''–*h''*. ♂ ♀ ad. et imm. sk.	Khandeish, April (*J. Davidson*).	Hume and Tweeddale Colls.
i''–*l''*. ♂ ♀ ad. sk.	Ahmednugger Dist., Feb., July, Nov. (*S. B. Fairbank*).	Tweeddale Coll.
m''–*o''*. ♂ ♀ ad. et ♂ imm. sk.	N. Africa.	Purchased.
p'', *q''*. ♂ ♀ ad. sk.	N.E. Africa.	Gould Coll.
r''–*t''*. ♂ ♀ ad. sk.	Egypt, Jan., Feb. (*G. E. S.*).	Shelley Coll.
u''. ♂ ad. st.	Egypt.	Sir J. Bowring [P.].
v''. ♀ ad. sk.	Fayoom, Egypt, Feb. (*G. E. S.*).	Shelley Coll.
w''. ♂ ad. sk.	Bogosland.	Esler Coll.
x''. ♀ ad. sk.	Abyssinia.	India Museum [P.].
y''. ♀ ad. sk.	Mai Wallet, Aug. (*W. Jesse*).	Tweeddale Coll.
z''–*b*^{3}. ♂ ♀ ad. sk.	Kilimanjaro, June.	H. C. V. Hunter, Esq. [P.].
c^3–*d*^{3}. ♂ ♀ ad. sk.	Kilimanjaro.	F. J. Jackson, Esq. [P.].
e^3. ♀ ad. sk.	[S. Africa ?]	
f^3. Skeleton.		Zool. Soc. Coll.

4. Pteroclurus senegallus.

Senegal Grous, *Lath. Gen. Syn.* ii. p. 749 (1783); *id. Gen. Hist.* viii. p. 253 (1823).

Gelinote du Sénégal, *Daubent. Pl. Enl.* no. 130.

Libyan Grous, *Lath. Gen. Hist.* viii. p. 253, pl. cxxviii. ♀ (1823).

Tetrao senegallus, *Linn. Mantissa*, p. 526 (1867–71); *Müll. Suppl. Linn. S. N.* p. 127 (1776).

Pterocles senegallus, *Shelley, B. Egypt*, p. 220 (1872); *Hume, S. F.* i. p. 221 (1873) [Sindh]; *id. S. F.* ii. p. 331 (1874) [Shahpoor Dist.]; *Butler, S. F.* iv. p. 4 (1876) [Guzerat and Kattiawar]; *id. S. F.* iv. p. 508 (1876) [Jodhpur Dist.]; *Lloyd, Ibis*, 1876, p. 280 [Kattiawar]; *Blanford, E. Persia*, ii. p. 271 (1876 [Baluchistan]; *Hume, S. F.* v. p. 60 (1877) [Jezulmere]; *Butler, S. F.* v. p. 222 (1877) [Runn of Cutch]; *Doig, S. F.* viii. p. 371 (1879) [E. Narra]; *Tufnell, S. F.* ix. p. 200 (1880) [Punjab Frontier]; *Swinhoe, Ibis*, 1882, p. 118 [S. Afghanistan].

Tetrao senegalus, *Lath. Gen. Ind. Orn.* ii. p. 642 (1790).
Pterocles senegalus, *Gray, List B.* iii. p. 50 (1844); *Gray, Gen. B.* iii. p. 519 (1845); *Tristram, Ibis*, 1860, p. 71 [S. Sahara]; *Gray, List B.* v. p. 5 (1867); *Hume, S. F.* vii. p. 161 (1878) [N.W. India, Sindh]; *Elliot, P. Z. S.* 1878, p. 243; *Hume & Marshall, Game B. Ind.* i. p. 53 (1878); *Butler, Cat. B. Sind, etc.* p. 53 (1879); *Tristr. Palest.* p. 122 (1884); *Hart, Faun. Flor. Sinai*, p. 224 (1891).
Pteroclurus senegalus, *Levaill. Explor. Algér.* p. 234 (1867).
Pterocles senegalensis, *Rüppell, Vög. N. Ost-Afr.* p. 106 (1845) [N. Africa]; *Blyth, J. As. Soc. Beng.* xxiv. p. 303 (1856) [Somali Land]; *Taylor, Ibis*, 1859, p. 50 [Egypt]; *Speke, Ibis*, 1860, p. 247 [Somali Land]; *Adams, Ibis*, 1864, p. 27 [Egypt and Nubia]; *Taylor, Ibis*, 1867, p. 67; *Shelley, Ibis*, 1871, p. 144 [Egypt].
Pterocles guttatus, *Licht. Verz. Doubl.* p. 64 (1823); *Temm. Pl. Col.* v. pl. 27 [no. 345] (1825); *Wagl. Syst. Av.* p. 283 (1827); *Gould, B. Asia*, vi. pl. 62 (1851); *Finsch & Hartlaub, Ost-Afr.* p. 566 (1870); *Blyth, Ibis*, 1872, p. 89; *Heuglin, Orn. N.Ost-Afr.* iii. p. 859 (1873).

Adult male. Top of the head, back, and rump isabelline, shading into yellowish buff on the upper tail-coverts; a band of pale grey commences on the lores and passing round the eyes circumscribes the top of the head; throat and rest of face ochre, base of throat pale grey; chest and breast, sides of the belly, and flanks like the back but paler; centre of belly blackish brown; under tail-coverts white; primaries and primary-coverts isabelline, the former shaded on the inner web and towards the extremity with dark brown, and the inner ones tipped and partially margined on the inner web with buff, while the latter have incomplete dark brown shaft-stripes; secondaries brownish black, edged on the inner web with pale buff; scapulars and rest of wing-coverts dull isabelline brown at the base, shading into dull vinaceous grey and grey, the latter tipped with buff and the former with dull ochre; axillaries whitish buff; tail of 16 feathers, central pair yellowish buff like the upper tail-coverts, and produced into long black filaments, outer feathers isabelline brown, shading into dull black and tipped with white. Total length 13 inches, wing 8, tail 5·4, tarsus 1.

Adult female. Differs from the adult male in having the top of the head and remainder of the upper surface nearly uniform pale isabelline, and the stripe commencing on the lores and passing round the eye and along the side of the head whitish buff; all these parts, together with the chest, are ornamented with round black spots; the throat is paler yellow, and the centre pair of tail-feathers are isabelline barred with blackish grey, and produced into shorter filaments; the rest of the plumage is the same as that of the male. Total length 12·5 inches, wing 7·4, tail 4, tarsus 0·9.

Hab. N. Africa and S.W. Asia, ranging from the Southern Sahara to N.W. India.

a. ♀ ad. sk.	Mhow, May.	Lt.-Col. Swinhoe [P.].
b. ♂ ad. sk.	Pokharun, 70 miles N. of Jodhpur, Jan. (*Dr. Newman*).	Hume Coll.

c. ♂ ad. sk.	Sehwan Dist., Sindh, Jan. (*A. O. H.*).	Hume Coll.
d, *e.* ♂ ♀ ad. sk.	Sehwan Dist., Sind, Feb. (*W. T. Blanford*).	Hume Coll.
f–*l.* ♂ ♀ ad. sk.	Munchur Lake, Jan. (*A. O. H.*).	Hume Coll.
m. ♂ ad. sk.	Larkhana, Jan. (*A. O. H.*).	Hume Coll.
n–*u.* ♂ ♀ ad. sk.	Mehur, Jan. (*A. O. H.*).	Hume Coll.
v, *w.* ♂ ♀ ad. sk.	Roree, Nov. (*W. Griffiths*).	India Museum [P.].
x, *y.* ♂ ♀ ad. sk.	Jacobabad.	Hume Coll.
z. ♀ ad. sk.	Shikarpur, March (*W. T. Blanford*).	Hume Coll.
a'. ♂ ad. sk.	Shahpur Dist., Punjab, Dec. (*F. Field*).	Hume Coll.
b'. ♂ ad. sk.	Persia.	Purchased.
c'. ♀ ad. sk.	Mesopotamia (*Jones*).	India Museum [P.].
d', *e'.* ♂ ♀ ad. st.	Bagdad.	Sir K. Loftus, [P.].
f'. ♂ ad. sk.	Morzouk, Fezzan, March (*G. B. Gaylinffi*).	Gould Coll.
g'. ♀ ad. sk.	Egypt.	Sir J. Bowring, [P.].
h'. ♀ ad. sk.	Egypt, March (*G. E. S.*).	Shelley Coll.
i', *k'.* ♂ ♀ ad. sk.	No locality (*Lort Phillips*).	Shelley Coll.

3. PTEROCLES.

Type.

Pterocles, *Temm. Man. Orn.* p. 299 (1815), *& Pig. et Gal.* iii. pp. 238, 712 (1815) ..... P. arenarius.

Tarsi feathered; toes naked; small hind toe always present; two central tail-feathers not produced.

Range. Africa, Madagascar, Canary Islands, S. Europe, and S.W. and Central Asia.

Key to the Species.

A. Belly black.
  a. Feathers of belly uniform black, not edged with white.
    a'. Throat chestnut, terminated by a black band; chest and breast uniform dove-grey; feathers of the back pale rufous and grey with rufous-buff or yellow ends ..... *arenarius* ♂, p. 18.
    b'. Throat yellowish white, terminated by a black band; chest and upper breast pale buff, with a subterminal black spot on each feather; back pale rufous buff, thickly barred with wavy black marks ..... *arenarius* ♀, p. 18.
  b. Most feathers of the belly narrowly margined with white.
    c'. A broad black bar edged on both sides with white passes up the middle of the throat and surrounds the gape; a white and black superciliary stripe; chest uniform buff-grey ..... *decoratus* ♂, p. 21.

d'. Chin and throat uniform buff, or with a few small black spots; no white and black superciliary stripe; chest buff, transversely barred with black ..... *decoratus* ♀, p. 21.

B. Belly not black.

c. Tarsus uniform, not barred with black or brown; under tail-coverts uniform *.

e'. Upper surface of shaft of first primary white.

a''. Upper and under parts spotted with white.

a'''. Chin, throat, and superciliary stripe slate-grey ..... *variegatus* ♂, p. 22.

b'''. Chin, throat, and superciliary stripe pale buff..... *variegatus* ♀, p. 22.

b''. Upper and under parts not spotted with white.

c'''. Throat yellow, bisected for about half its length by a black bar, which surrounds the gape, but is interrupted on the middle of the forehead by a whitish patch; chest and breast uniform ..... *coronatus* ♂, p. 23.

d'''. Throat yellow, no black bar; chest and breast barred with black. *coronatus* ♀, p. 23.

f'. Upper surface of shaft of first primary dark or dusky.

c''. Under tail-coverts dark chestnut.

e'''. Throat and superciliary stripe pale buff-yellow, a black band across the neck and from the gape to the eye; lower breast and belly uniform deep chestnut .... *gutturalis* ♂, p. 25.

f'''. Throat pale yellowish buff, no marked superciliary stripe, no black band across the throat; that from the gape to the eye brownish; lower breast and belly chestnut, barred with black ..... *gutturalis* ♀, p. 25.

d''. Under tail-coverts buff.

g'''. A broad black band surrounds the gape; lower breast and belly barred with black; back uniform. *personatus* ♂, p. 26.

h'''. No black band round the gape; lower breast, belly, and back barred with black..... *personatus* ♀, p. 26.

d. Tarsus uniform or barred; under tail-coverts closely barred with black.

g'. A pectoral zone.

e''. Throat spotted with black; chest above zone narrowly barred with black; zone of four bars, buff, reddish brown, buff, and black; wing-

* The female of *P. coronatus* has sometimes a bar or two of black, wide apart, on the under tail-coverts.

coverts white, narrowly barred with black, and with buff tips..... *lichtensteini* ♂, p. 29.

f''. Throat not spotted with black; chest above zone uniform.

i'''. Zone of two bars, white and black. *bicinctus* ♂, p. 30.

k'''. Zone of three bars, chestnut, white or buff, and black.

a^4. Each wing-covert with one or two separate deep black bars narrowly edged with white on each side ..... *quadricinctus* ♂, p. 32.

b^4. Each wing-covert with a white and a grey subterminal band, sometimes with four alternate white and grey subterminal bands..... *fasciatus* ♂, p. 27.

h'. No pectoral zone.

g''. Upper breast barred with black.

l'''. Tarsus pure white; throat thickly spotted with black to the chin; black bars on the wing-coverts and chest narrow and regular.... *lichtensteini* ♀, p. 29.

m'''. Tarsus barred with brownish black; throat spotted to the chin, especially on the sides; black bars of the wing-coverts and chest wavy and irregular ..... *bicinctus* ♀, p. 30.

n'''. Tarsus barred with blackish brown; only a few spots at the base of the throat; bars on the wing-coverts and chest narrow and regular ..... *fasciatus* ♀, p. 27.

h''. Upper breast uniform buff, contrasting with the barred white and black belly; tarsus barred with black; throat immaculate ... . *quadricinctus* ♀, p. 32.

1. Pterocles arenarius.

Sand Grous, *Lath. Gen. Syn.* ii. p. 751 (1783); *id. Gen. Hist.* viii. p. 254 (1823).

Tetrao orientalis, *Hasselq. Reise Paläst.* p. 330 (1762).

Tetrao arenarius, *Pallas, Nov. Com. Petrop.* xix. p. 418, pl. viii. (1775); *Gm. S. N.* i. p. 755 (1788); *Bonn. Tabl. Encycl. Méth.* i. p. 200, pl. 92. fig. 4 (1791); *Pallas, Zoogr. Rosso-Asiat.* ii. p. 73 (nec pl.) (1811) [Deserts N. of the Caspian].

Œnas arenaria, *Vieill. N. Dict. d'Hist. Nat.* xii. p. 423 (1817).

Pterocles arenarius, *Temm. Man. d'Orn.* p. 300 (1815); *Steph. Shaw's Gen. Zool.* xi. p. 305 (1819); *Temm. Man. d'Orn.* p. 476 (1820); *Licht. Verz. Doubl.* p. 64 (1823); *Temm. Pl. Col.* v. pls. 21, 22, nos. 52, 53 (1823); *Wagler, Syst. Av.* p. 279 (1827); *Wern. Atl. Orn. d'Eur.* ord. 10, pl. 13 (1828); *Griffith's ed. Cuv.* iii. p. 259, pl. (1829); *Brehm, Handb. Vög. Deutschl.* p. 498 (1831); *Naum. Nat. Vög. Deutschl.* vi. p. 258, pl. 153 (1833); *Jard. Nat. Lib., Orn.* iv. p. 184, pls. xxiv.–v. (1834); *Gould, B. Europe*, iv. p. 257, pl. (1837); *Démid. Voy. Russ. Mérid.* iii. p. 222 (1840); *Webb & Berthelot, Orn. Canarienne*, p. 28 (1841); *Hodgson, Icon.*

med. in Brit. Mus. Gallinæ, no. 784, *and Gray's Zool. Misc.* p. 85 (1844); *Gray, List B.* iii. p. 49 (1844); *Gray, Gen. B.* iii. p. 518 (1845); *Degl. Orn. Europ.* ii. p. 20 (1849); *Blyth, Cat. B. Mus. As. Soc.* p. 249 (1849); *Schinz, Nat. Vögel*, p. 100, pl. 78 (1853); *Salvin, Ibis*, 1859, p. 353 [E. Atlas]; *Linderm, Vög. Griechenl.* p. 122 (1860); *Tristram, Ibis*, 1860, p. 69 [Sahara]; *Irby, Ibis*, 1861, p. 235 [Oudh]; *Companyo, Hist. Nat. Pyrénées-Orient.* iii. p. 200 (1863); *Jerd. B. Ind.* ii. p. 496 (1863); *Lilford, Ibis*, 1865, p. 167, 1886, p. 379 [Interior of Spain]; *Chambers, Ibis*, 1867, p. 103 [Tripoli]; *Degl. Orn. Europ.* ii. p. 25 (1867); *Bree, B. Eur.* iii. p. 226, pl. (1867); *Levaill. Explor. Algér.* p. 227 (1867); *Gray, List B.* v. p. 2 (1867); *Drake, Ibis*, 1867, p. 428 [E. Morocco]; *Beavan, Ibis*, 1868, p. 377 [Umballah]; *Smith, Ibis*, 1868, p. 450 [Portugal]; *Drake, Ibis*, 1869, p. 152 [Morocco]; *Fritsch, Nat. Vög. Europa's*, p. 275 (1870), pl. 32. figs. 9, 13 (1871); *Gurney, Ibis*, 1871, p. 296 [Algeria]; *Godman, Ibis*, 1872, p. 219 [Fuerteventura, Gran Canary]; *Severtz. Turkest. Jevotnie*, p. 68 (1873); *Hume, S. F.* i. p. 219 (1873) [Sindh, N.W. Punjab, Rajapootana]; *Adam, S. F.* i. p. 391 (1873) [Sambhur]; *Dresser, B. Europe*, vii. p. 61, pl. 466 (1874); *Severtz. J. f. O.* 1875, p. 180 [Turkestan]; *Krüper, J. f. O.* 1875, p. 282 [Asia Minor]; *Irby, Orn. Gibraltar*, p. 135 (1875); *James, S. F.* iii. p. 418 (1875) [Runn of Cutch]; *Butler, S. F.* iv. p. 4 (1876) [N. Guzerat]; *Wise, S. F.* iv. p. 230 (1876) [Karachi Dist.]; *Lacroix, Rev. et Mag. Zool.* 1876, p. 389 [Toulouse]; *Blanf. E. Persia*, ii. p. 271 (1876) [Persia]; *Dresser, Ibis*, 1876, p. 322 [Turkestan]; *Hume, S. F.* iv. p. 4 (1876) [Jodhpur]; *Butler, S. F.* v. p. 222 (1877) [S. of Babra], & p. 231 (1877) [Deesa]; *Danford, Ibis*, 1877, p. 273 (Samsun, Black Sea]; *Hume & Marshall, Game B. Ind.* i. p. 47 (1878); *Elliot, P. Z. S.* 1878, p. 245; *Butler, S. F.* vii. p. 186 (1878) [Lower Sindh]; *Hume, S. F.* vii. p. 161 (1878); *Danford, Ibis*, 1878, p. 27; *Marshall, S. F.* viii. p. 492 (1879) [Kandahar]; *Bogd. B. Caucas.* p. 128 (1879); *Butler, Cat. B. Sind, etc.* p. 52 (1879); *Finsch, Verh. Ges. Wien*, xxix. p. 231 (1880) [Zaisan]; *Reid, S. F.* x. p. 61 (1880) [Lucknow]; *Danford, Ibis*, 1880, p. 94 [Asia Minor]; *Barnes, S. F.* ix. pp. 219, 458 (1880) [Chaman, S. Afghanistan]; *Giglioli, Ibis*, 1881, p. 184 [Sicily]; *Swinhoe, Ibis*, 1882, p. 118 [Khojak, S. Afghanistan]; *Seebohm, Ibis*, 1882, p. 220 [Astrakhan and Kirghiz Steppes]; *Biddulph, S. F.* x. p. 275 (1882); *id. Ibis*, 1882, p. 287 [Gilgit]; *Seebohm, Ibis*, 1882, p. 425 [Samarcand]; *Gadow, P. Z. S.* 1882, p. 312; *Radde, Ornis Caucas.* p. 333 (1884); *Tristr. Palest.* p. 122 (1884); *Zaroudn. Bull. Mosc.* lxi. p. 321 (1885) [Transcaspia]; *Swinhoe & Barnes, Ibis*, 1885, p. 131 [Central India]; *Menzbier, Ibis*, 1885, p. 356 [Kashgar]; *Tait, Ibis*, 1887, p. 380 [Evora, Portugal]; *Koenig, J.f. O.* 1888, p. 255 [Tunis]; *Pleske, Mém. Ac. St. Pétersb.* (7) xxxvi. no. 3, p. 46 (1888); *Tristr. Ibis*, 1889, p. 11 [Fuerteventura]; *St. John, Ibis*, 1889, p. 174 [Kelát, S. Afghanistan]; *Waldo, Ibis*, 1889, p. 507 [Fuerteventura]; *Sharpe, Trans. Linn. Soc.*, 2nd ser. *Zool.* v. pt. 3, p. 85 (1889); [N.W. Afghanistan]; *Zaroudn. Bull. Mosc.* n. s. iii. p. 811 (1890).

Pteroclis arenarius, *Olphe-Galliard, Faun. Orn. Europ. Occ.* fasc. xxxix. p. 69 (1886).

Pterocles arenaria, var. magna, *Zaroudn. Bull. Mosc.* n. s. iii. p. 811 (1890) [Transcaspia].

Tetrao fasciatus, *Desf.* (*nec Scop.*) *Mém. Ac. R. Sc. Paris*, 1787, p. 502; *Bonn. Tabl. Encycl. Méth.* i. p. 200, pl. 188. fig. 13 (1791).

Perdix aragonica, *Lath. Ind. Orn.* ii. p. 645 (1790).
Tetrao subtridactylus, *Hasselq.* [ubi ?]; *Lath. Gen. Hist.* viii. p. 254 (1823).

Adult male. Chin and throat chestnut, extending round the sides of the neck and gradually paling into orange on the nape; a triangular black patch at the base of the throat; rest of the head and upper back grey, tinged with dull yellow; lower back, rump, and upper tail-coverts darker grey, pale vinaceous buff at the base, and each feather with a terminal spot of rufous buff. Primaries and primary-coverts grey; the outer web of the first primary blackish grey; secondaries with the basal half white and the rest greyish brown. Secondary and inner median wing-coverts whitish, with the greater part of the outer web ochre; rest of wing-coverts and scapulars like the lower back, but the terminal spot mostly ochre tinged with rufous buff internally. Axillaries and under wing-coverts white. Chest and upper breast isabelline grey, separated by a moderately wide black band. Lower breast and rest of underparts black. Tarsi and under tail-coverts white. Tail of 16 feathers, centre pair rufous buff, barred with grey and tipped with greyish ochre, rest similar but tipped with white, and gradually becoming greyer and darker on the outer ones till the last pair have the ground-colour grey, slightly tinged with reddish buff. Total length 13·5 inches, wing 9·3, tail 4·2, tarsus 1.

The *immature male* differs from the adult in having the tips of the primaries and primary-coverts edged with buff vermiculated with black, some of the feathers of the top of the head with a black subterminal band and rufous-buff margin, and several feathers of the upper back and scapulars yellowish buff barred with black as in the female.

A *quite young male* specimen has the whole of the upper parts and the chest and upper breast buff, irregularly barred and marked with black, but otherwise resembles the adult.

Adult female. Differs from the male in having the throat yellowish white, the outer feathers with black shafts, and terminated by a narrow black and rather wide pale grey band; the rest of the head, upper back, and chest isabelline, a submarginal black spot at the extremity of each feather; back and rest of upper parts pale rufous buff, closely barred and marked with black; upper breast yellowish white: plumage otherwise like that of the male. Total length 13 inches, wing 8·6, tail 4, tarsus 1.

Immature females have the primaries and primary-coverts edged with buff mixed with brownish black.

Hab. N. Africa, S. Europe, S.W. and Central Asia, ranging from Fuerteventura and Gran Canary in the west to N.W. India in the east, and extending southwards to the Sahara, and north to the Kirghiz Steppes and Dzungaria.

a, *b*. ♂ ♀ ad. sk.	Aboo.	Hume Coll.
c, *d*. ♂ ♀ ad. sk.	W. of Jodhpur, Jan. & Feb. (*W. T. Blanford*).	Hume Coll.

e–l. ♂ ♀ ad.; ♀ imm. sk.	Sambhur, Nov., Dec., Jan. (*A. O. H.* & *R. M. Adam*).	Hume Coll.
m. ♂ ad. sk.	Etawah.	Hume Coll.
n–c'. ♂ ♀ ad. et imm. sk.	Sultanpur, Gurgaon Dist., Punjab, Oct. to Feb. (*W. N. Chill*).	Hume Coll.
d'–l''. ♂ ♀ ad. et imm. sk.	Sirza Dist., Punjab, Nov. to March (*A. O. H.*).	Hume Coll.
m''. ♂ ad. sk.	Delhi.	Hume Coll.
n''. ♀ ad. st.	Nepal.	B. H. Hodgson, Esq. [P.].
o''. ♂ ad. sk.	Hissar Dist., Dec. (*A. O. H.*).	Hume Coll.
p''. ♀ imm. sk.	Fazilka, Nov. (*A. O. H.*).	Hume Coll.
q''. ♀ imm. sk.	Umballah, Mar. (*Dr. Scott*).	Tweeddale Coll.
r'', s''. ♂ imm. et ♀ ad. sk.	Ludhiana (*W. Griffith*).	India Museum [P.].
t'', u''. ♂ ad. sk.	Ferozepur, Nov. (*A. O. H.*).	Hume Coll.
v''. ♂ ad. sk.	Multan.	Gould Coll.
w''. ♀ ad. sk. (pale variety).	N.W. India.	Tweeddale Coll.
x''. ♂ ad. sk.	Gojhan, Gunduvu, July (*W. Griffith*).	India Museum [P.].
y''. ♂ imm. sk.	Subzukote (*W. Griffith*).	India Museum [P.].
z'', a³. ♂ ♀ ad. sk.	Murdan, March (*J. R. Johnson*).	Hume Coll.
b³. ♀ ad. sk.	[Kashgar.]	India Museum [P.].
c³–e³. ♂ ad. sk.	Dzungaria, June.	
f³, g³. ♂ ♀ ad. sk.	Saiar Mountains.	St. George Littledale, Esq. [P.].
h³. ♂ ad. sk.	Lepsa, Turkestan Steppes, May.	Dr. O. Finsch [C.].
i³. ♀ imm. sk.	Afghánistan (*W. Griffith*).	India Museum [P.].
k³. ♀ ad. sk.	Kabul, Oct. (*W. Griffith*).	India Museum [P.].
l³, m³. ♂ ad.; ♀ imm. sk.	Kandahar, Jan.	Lt.-Col. Swinhoe [P.].
n³. ♂ ad. sk.	Kandahar, April (*O. St. John*).	Hume Coll.
o³, p³. ♂ ♀ ad. sk.	Gulran, March.	Dr. Aitchison [P.].
q³. ♂ ad. sk.	E. of Shiraz, S. Persia, May.	W. T. Blanford, Esq. [P.].
r³. ♂ imm. sk.	Babylon (*Jones*).	India Museum [P.].
s³. ♂ ad. st.	Erzerum.	
t³. ♀ ad. sk.	Erzerum, April.	Purchased.
u³, v³. ♂ ♀ ad. sk.	Trebizond, Aug.	Gould Coll.
w³, x³. ♂ ♀ ad. sk.	Spain.	W. Owen, Esq. [P.].
y³. ♂ juv. sk.	Seville, Oct. (*H. Saunders*).	Tweeddale Coll.
z³. ♂ ad. sk.	Grenada (*H. Saunders*).	Shelley Coll.
a⁴, b⁴. ♂ ♀ ad. sk.	No locality (*Lort Phillips*).	Shelley Coll.
c⁴, d⁴. Skeletons.	No locality.	Purchased.

2. Pterocles decoratus.

Pterocles decoratus, *Cabanis, J. f. O.* 1868, p. 413 [Lake Jipe], 1870, pl. iii.; *Finsch & Hartlaub, Ost-Afr.* p. 565 (1870) [Unyamuesi]; *Heuglin, Orn. N.Ost-Afr.* iii. p. 870 (1873) [Lake Jipe]; *Elliot, P. Z. S.* 1878, p. 260; *Fischer, Zeit. ges. Orn.* i. p. 378

(1884) [Chaga Dt.]; *id. J. f. O.* 1885, p. 117; *Reichenow. J. f. O.* 1887, p. 50 [Wembaere]; *Shelley, Ibis*, 1888, p. 294 [Langora, Rombo, Useri R.]; *id. P. Z. S.* 1889, p. 369 [Useri R.]; *Hartl. Abh. nat. Ver. Brem.* xii. Heft i. p. 38 (1891) [Gombe ja Jenuju]; *Sharpe, Ibis*, 1892, p. 549 [River Tsavo].

Adult male. A broad black band edged on either side with white passes up the middle of the throat and widening out on the chin surrounds the gape; a white and black superciliary stripe; top of the head and nape buff, with black shaft-stripes; sides of the face pale vinaceous buff, shading into darker on the sides of the neck and chest. Feathers of the back of the neck, back, rump, and upper tail-coverts dull buff barred with black. Scapulars darker, with the black bars more or less confluent and widely tipped with yellowish buff. Greater secondary, median, and lesser wing-coverts buff with one or two rather wide-set black bars. Primaries, primary-coverts, and secondaries black, the inner primaries tipped with white. Axillaries black. Upper breast white, separated from the chest by a narrow black band; lower breast and belly black, most of the feathers narrowly margined with white; lower part of leg and tarsus whitish buff. Under tail-coverts bright buff, each with a subterminal black triangular mark. Tail of 14 feathers, like the upper tail-coverts, but the outer feathers are tipped with whitish buff. Total length 8·8 inches, wing 6·4, tail 2·7, tarsus 1.

Adult female. Differs from the adult male in having no black and white bands on the head, the black bars and markings on the back and wing-coverts following the shape of the feathers, and the neck and chest barred with black. Total length 8·6 inches, wing 6·1, tail 2·6, tarsus 1.

Hab. East Africa; about Lake Jipe and Kilimanjaro, and extending in the west to the Wembaere Steppes.

a, b. ♂ ♀ ad. sk.	Kilimanjaro, June.	F. J. Jackson, Esq. [P.].
c, d. ♂ ♀ ad. sk.	Kilimanjaro, June.	H. C. V. Hunter, Esq. [P.].

3. Pterocles variegatus.

Tetrao (Pterocles) variegatus, *Burchell, Trav. S. Afr.* ii. p. 345 (1824) [Plains of Litakun].

Pterocles variegatus, *Smith, Rep. Exped. Centr. Afr.* p. 56 (1836) [N. of Latakoo]; *Smith, Zool. S. Afr.* pl. x. (1838) [Tsining, W. of Latakoo]; *Gray, List B.* iii. p. 50 (1844); *id. Gen. B.* iii. p. 519 (1845); *id. List B.* v. p. 3 (1867); *Layard, B. S. Afr.* p. 279 (1867); *Gurney, Ibis*, 1868, p. 269; *Layard, Ibis*, 1869, p. 375; *Ayres, Ibis*, 1871, p. 262 [Limpopo & Mariqua R.]; *Gurney ed. Andersson's B. Damaraland*, p. 242 (1872) [Middle & N. Damaraland & Lake Region]; *Elliot, P. Z. S.* 1878, p. 244; *Shelley, Ibis*, 1882, p. 360 [Crocodile R. & Bamangwato]; *Holub u. Pelz. Orn. Südafr.* p. 181 (1882) [Middle & N. Central Africa].

Adult male. Throat, lores, and superciliary stripes pale grey; ear-coverts buff; feathers on the top of the head dark brown, with

the outer part of each web buff; back, rump, and upper tail-coverts blackish, tipped with dull olive; scapulars, lesser and median wing-coverts somewhat brighter, tipped with yellowish olive, each feather with one or two round white spots on the lateral margin; greater secondary-coverts grey, with a rufous stripe down the shaft, a white spot on each web and a wide white margin. Primaries, primary-coverts, and secondaries black, the shafts of the outer primaries, and the margins of the inner primaries and outer secondaries, white. Chest, breast, and belly dull rufous, shading into buff on the tarsi and under tail-coverts; the feathers of the chest and breast have also a round white spot near the extremity of both webs, while the feathers of the belly are white internally. Axillaries and under wing-coverts dull rufous. Tail of 14 feathers, black, barred and tipped with buffy white. Total length 9·8 inches, wing 6·3, tail 2·8, tarsus 1.

Immature male differs in having the throat and eye-stripe greyish buff.

Adult female. Differs from the adult male in having the chin, throat, and eye-stripe pale buff instead of pale grey; the belly and thighs are pale rufous buff, indistinctly barred with white; and the axillaries and under wing-coverts are grey, tinged with rufous buff. Total length 9·9 inches, wing 6·3, tail 2·8, tarsus ·95.

Hab. S. Africa; eastwards to the Transvaal, and west to Damaraland.

a. ♀ ad. st.	Damaraland.	C. J. Andersson, Esq. [C.].
b. ♂ ad st.	S. Africa.	Purchased.
c, d. ♂ imm.; ♀ ad. sk.	S. Africa.	M. J. Verreaux.
e. ♂ ad. sk.	Kimberley, June.	J. E. Harting, Esq. [P.].
f. ♂ ad. sk.	Limonie Pan, Bamangwato country, June (*J. S. Jameson*).	Shelley Coll.

4. Pterocles coronatus.

Pterocles coronatus, *Licht. Verz. Doubl.* p. 65 (1823); *Temm. Pl. Col.* v. pls. 23 & 24 [nos. 339 & 340] (1825); *Wagl. Syst. Av.* p. 280 (1827); *Rüppell, Vög. N.Ost-Afr.* p. 106 (1845) [Nubia, Kordofan]; *Gray, Gen. B.* iii. p. 519 (1845); *Gould, B. Asia,* vi. pl. 63 (1851); *Tristram, Ibis,* 1860, p. 71 [S. Sahara]; *Adams, Ibis,* 1864, p. 27 [2nd Cataract, Nile]; *Allen, Ibis,* 1864, p. 240 [El Kab]; *Levaill. Explor. Algér.* p. 230 (1867); *Gray, List B.* v. p. 3 (1867); *Wyatt, Ibis,* 1870, p. 16 [Sinai]; *Shelley, Ibis,* 1871, p. 144; *id. B. Egypt,* p. 221 (1872); *Hume, Ibis,* 1872, p. 468 [Sindh]; *Heuglin, Orn. N.Ost-Afr.* iii. p. 863 (1873); *Hume, S. F.* i. p. 224 (1873) [Jacobabad]; *Wise, S. F.* iii. p. 267 (1875) [Sourjana & Eric Hills, Sindh]; *Blanf. E. Persia,* ii. p. 272 (1876) [Baluchistan]; *Elliot, P. Z. S.* 1878, p. 242; *Hume & Marshall, Game B. Ind.* i. p. 57 (1878); *Hume, S. F.* vii. p. 161 (1878) [Sind, Dera Ghazi Khan, Kelát]; *Butler, Cat. B. Sind, etc.* p. 53 (1879); *Tufnell, S. F.* ix. p. 200 (1880) [Baluchistan];

Barnes, S. F. ix. pp. 219, 458 (1880) [Chaman, S. Afghanistan]; *Swinhoe, Ibis*, 1882, p. 118 [Maiwand]; *Tristr. Palest.* p. 122 (1884); *Sharpe, Ibis*, 1886, p. 166 [Muscat]; *St. John, Ibis*, 1889, p. 174 [S. Afghanistan]; *Sharpe, Trans. Linn. Soc.*, 2nd ser. *Zool.* v. pt. 3, p. 85 (1889) [Baluchistan Desert].

Adult male. Very similar in general appearance to the male of *Pteroclurus senegallus*, from which, however, it may be distinguished at a glance by the centre pair of tail-feathers not being produced into filaments, the black round the gape, and the absence of black on the belly. A black band on the chin and centre of the throat embraces the gape and terminates on each side in a black loral patch, extending nearly to the perpendicular from the anterior of the eye; the remainder of the fore part of the face is white, merging on the cheeks into the ochre-yellow of the throat and neck; top of the head dull vinaceous buff, separated from the ochre parts by a grey zone. The rest of the upper parts isabelline; underparts pale buff; under tail-coverts white. Axillaries white. Primaries, primary-coverts, and secondaries blackish brown; outer primaries with white shafts, inner tipped with whitish buff; secondary-coverts buff; rest of wing-coverts and scapulars vinaceous buff, with a pale buff patch at the extremity edged internally with dusky grey. Tail of 16 feathers: centre pair isabelline like the upper tail-coverts; rest rufous, with a subterminal black bar and white tip. Total length 11 inches, wing 7·1, tail 3·2, tarsus 0·9.

In the *immature male* the tips of the primaries, centre pair of tail-feathers, and some of the secondary-coverts and scapulars are buff, vermiculated with black.

Adult female. Differs from the adult male in having the top of the head with black shaft-stripes and marks and the whole of the upper surface and the chest barred with blackish brown, the ochre throat finely spotted with black, and the breast and belly spotted, marked, or indistinctly barred with dark brown.

In some African specimens the whole of the upper parts are washed with vinaceous, and the black marks and bars on the upper parts and chest are very much reduced, nearly absent on the scapulars, while the throat, breast, and belly are immaculate.

In a specimen from the Eric Hills the barring is quite unusually heavy, some of the scapulars are nearly uniform blackish brown, toothed with buff on the margins and barred at the extremity.

All these specimens appear to be perfectly adult, but our limited series is insufficient to enable me to form any definite opinion as to the reason of these differences.

Total length 10·3 inches, wing 6·6, tail 3, tarsus 0·9.

Hab. N.E. Africa; S.W. Asia, ranging from S. Sahara to the extreme N.W. of India.

a–c. ♂ ♀ ad. sk.	Mhow District, Feb.	Lieut.-Col. Swinhoe [P.].
d–g. ♂ ♀ ad. sk.	Eric Hills, Sindh, Feb., Dec.	Hume Coll.
h. ♀ ad. sk.	West of Shikarpur, March (*W. T. Blanford*).	Hume Coll.

i. ♂ ad. sk.	Jacobabad.	Hume Coll.
k. ♀ ad. sk.	Fort Jumrood, Nov.	Hume Coll.
l, *m*. ♂ ur. ad. sk.	Bussoollah, Nov. (*W. Griffith*).	India Museum.
n–*p*. ♀ ad. sk.	Kashgar (*Dr. Bellew*).	India Museum.
q. ♀ ad. sk.	Chaman, Aug. (*Sir O. St. John*).	Hume Coll.
r, *s*. ♂ imm.; ♀ ad. sk.	Sang-bar, Nov.	Dr. Aitchison [C.].
t. ♀ ad. sk.	Baluchistan, Dec. (*O. T. Duke*).	Hume Coll.
u. ♂ ad. sk.	Saman-Dasht, Baluchistan, Jan.	W. T. Blanford, Esq. [P.].
v. ♀ ad. sk.	Yerdikhart, Persia, 7000 ft. July.	W. T. Blanford, Esq. [P.].
w–*y*. ♂ ♀ ad. sk.	Muscat.	Col. Mills [P.].
z. ♂ ad. st.	Algeria.	Purchased.
a', *b'*. ♂ ♀ ad. sk.	Wady-halfah (*Dodd*).	Shelley Coll.
c'. ♀ ad. st.	2nd Cataract of the Nile.	Dr. Leith Adams [P.].
d', *e'*. ♂ ad st.; ♀ ad. sk.	5th Cataract of the Nile.	F. Galton, Esq. [P.].
f'. ♀ ad. sk.	Dongola, Oct.	Hr. F. Bohndorff [C.].

5. Pterocles gutturalis.

Pterocles gutturalis, *Smith, Rep. Exped. Afr.* p. 56 (1836) [N. & S. of Kurrichaine]; *id. Zool. S. Afr.* pl. iii. ♂ (1838), & pl. xxxi. ♀ (1839); *Gray, List B.* iii. p. 50 (1844); *Heuglin, Orn. N.Ost-Afr.* p. 106 (1845) [Shoa]; *Gray, Gen. B.* iii. p. 519 (1845); *Des Murs, etc. Lefeb. Voy. Abyss.* p. 143 (1845–50) [Tigré]; *Gray, List B.* v. p. 3 (1867); *Layard, B. S. Afr.* p. 278 (1867); *Gurney, Ibis*, 1868, p. 269; *Ayres, Ibis*, 1869, p. 297 [Potchefstroom]; *Blanford, Geol. & Zool. Abyss.* p. 421 (1870) [Highlands of Abyssinia]; *Ayres, Ibis*, 1871, p. 268 [Limpopo R.]; *Heugl. Orn. N.O.-Afr.* iii. p. 862 (1873); *Buckley, Ibis*, 1874, p. 385 [N. Transvaal]; *Ayres, Ibis*, 1878, p. 298; *Elliot, P. Z. S.* 1878, p. 241; *Sharpe, in Oates' Matabelel.* p. 323 (1881); *Holub u. Pelz. Orn. Süd-Afr.* p. 182 (1882) [Marico, W. Transvaal]; *Shelley, Ibis*, 1882, p. 359 [Crocodile R. to Tati R.]; *Ayres, Ibis*, 1885, p. 346 [Rustenburg]; *Fischer, Zeit. ges. Orn.* i. p. 379 (1884) [Pangani, Chaga, & Kilimanjaro]; *id. J. f. O.* 1885, p. 117; *Reichenow, J. f. O.* 1887, p. 50 [Wembaere]; *Salvad. Ann. Mus. Civ. Genov.* xxvi. p. 306 (1888) [Shoa]; *Shelley, Ibis*, 1888, p. 294; *id. P. Z. S.* 1889, p. 370 [Useri R.]; *Reichenow, J. f. O.* 1891, pp. 142, 337 [Unyamuesi]; *Sharpe, Ibis*, 1892, p. 549 [Masailand].

Adult male *. A black band from the nostril to the eye; a narrow buff stripe from above the nostril to the back of the eye; top of the head dull olive-buff, shading into dull yellowish buff on the neck; chin, cheeks, and throat yellowish buff, divided from the neck by a wide black band. Back, rump, and upper tail-coverts olive-grey, scapulars blackish, with greyish-buff extremities. Primaries,

* The descriptions of this species are taken from freshly moulted specimens shot in June. Specimens in worn plumage have the buff and rufous parts much paler.

primary-coverts, and secondaries black, slightly margined with white; rest of the wing-coverts grey, with bright rust-coloured extremities. Axillaries black. Chest grey, tinged with vinaceous, shading into dark chestnut on the breast, belly, and under tail-coverts. Tarsi rufous buff. Tail of 16 feathers: centre pair like the upper tail-coverts; rest black, barred and tipped with chestnut. Total length 12 inches, wing 8·3, tail 3·4, tarsus 1·2.

Adult female. A brownish-black band from the nostril to the eye; a narrow black stripe from the lores to the back of the eye, and the chin and throat yellowish buff. Feathers of the top of the head, back, rump, upper tail-coverts, and chest yellowish buff, each with a wide black shaft-stripe enlarged at the extremity, the lower tail-coverts being also barred with black. Primaries, secondaries, and primary-coverts as in the male, but the outer secondaries are barred on the outer web with buff. Scapulars black, tipped and toothed on both webs with bright yellowish buff, and with a wide **W**-shaped subterminal band of the same colour; rest of wing-coverts the same, but with the dark parts much reduced in extent; breast, belly, and flanks dull rufous buff closely barred with black, under tail-coverts dark chestnut. Centre pair of tail-feathers yellowish buff, barred with black like the longer upper tail-coverts; rest like those of the male. Total length 11·6 inches, wing 8·2, tail 3·1, tarsus 1·1.

Hab. S.E., E., and N.E. Africa; ranging from the Transvaal in the south to the highlands of Abyssinia in the north, and westwards to the Wembaere Steppes, and Massiland.

a, b. ♂ ♀ ad. st.	S. Africa.	Purchased.
c. ♂ ad. sk.	S. Africa.	Earl of Derby [P.].
d–f. ♂ ♀ ad. sk.	Natal (*T. Ayres*).	Tweeddale Coll.
g, h. ♂ ad. sk.	Transvaal, July (*T. E. Buckley*).	Shelley Coll.
i, k. ♂ ♀ ad. sk.	Potchefstroom, Nov. (*T. Ayres*).	J. H. Gurney, Esq. [P.].
l–n. ♂ ♀ ad. sk.	Shasha River, Matabeleland, Aug.	W. E. & C. G. Oates, Esqrs. [P.].
o–q. ♂ ♀ ad. sk.	Kilimanjaro, June.	F. J. Jackson, Esq. [P.].
r, s. ♂ ♀ ad. sk.	Kilimanjaro, June.	H. C. V. Hunter, Esq. [P.].
t, u. ♂ ♀ ad. sk.	Dongolo, Tigrè, Abyssinia, March.	W. T. Blanford, Esq. [P.].

6. Pterocles personatus.

Pterocles personatus, *Gould, P. Z. S.* 1843, p. 15 (Madagascar); *id. Voy. Sulph., Zool.* p. 49, pl. 30 (1844); *Gray, List B.* iii. p. 50 (1844); *id. Gen. B.* iii. p. 519 (1845); *Hartlaub, Ann. Mag. N. H.* ii. p. 391 (1848); *id. J. f. O.* 1860, p. 165; *id. Orn. Beit. Faun. Madagas.* p. 71 (1861); *Pollen, Ned. Tijd. v. d. Dierk.* i. p. 317 (1863); *Grandidier, Rev. Mag. Zool.* 1867, p. 419; *Bartlett, P. Z. S.* 1875, p. 67; *Hartlaub, Die Vögel Madagascars*, p. 273 (1877); *Elliot, P. Z. S.* 1878, p. 240; *Grandidier, Hist. Madagas.* p. 48, pls. 196–8 (1885).

Adult male. A wide black band surrounds the gape; top of the head and upper back dark isabelline, shading into yellowish on the nape; lower back, rump, and upper tail-coverts blackish grey, thickly spotted with whitish buff; primaries, primary-coverts, and secondaries black; scapulars vinaceous brown, paler at the extremities; rest of the wing-coverts yellowish buff, the secondary-coverts each with a black shaft-stripe extending to within a third of the extremity, and some of the median with a brown terminal band. Axillaries black; throat white, tinged with buff. Chest vinaceous buff. Sides of breast white, rest of breast and belly rufous buff, all closely barred with black. Tarsi and under tail-coverts buff. Tail of 16 feathers, blackish grey irregularly barred and widely tipped with white. Total length 11·6 inches, wing 8·5, tail 3·7, tarsus 1.

Adult female. Differs from the adult male in having the top of the head striped with blackish brown; the nape, upper back, lesser and median wing-coverts regularly barred with the same colour; the scapulars blackish brown irregularly barred with buff, and the greater secondary-coverts buff irregularly barred with black. Total length ca. 11·5 inches, wing 8, tail 3·4, tarsus 1.

Hab. Madagascar.

a, b. ♂ ♀ ad. sk.	Madagascar.	Capt. Sir E. Belcher, R.N. [P.]. (Types of species.)
c. ♂ ad. sk.	Mourondava, W. coast of Madagascar.	Pollen & Van Dam Coll.

7. Pterocles fasciatus.

La Gélinotte des Indes, *Sonnerat, Voy. Ind.* ii. p. 164, pl. 96 (1782).

Indian Grous, *Lath. Gen. Syn.* ii. p. 752 (1783); *id. Gen. Hist.* viii. p. 260 (1823).

Tringa fasciata, *Scop. Del. Flor. et Faun.* pt. ii. p. 92 (1786).

Pterocles fasciatus, *Gray, List B.* iii. p. 49 (1844); *Gray, Gen. B.* iii. p. 518 (1845); *Blyth, Cat. B. Mus. As. Soc.* p. 249 (1849); *Gould, B. Asia*, vi. pl. 65 (1850); *Jerdon, B. Ind.* ii. p. 498 (1863); *Gray, List B.* v. p. 2 (1867); *Bevan, Ibis*, 1868, p. 378 [Gwalior, Umballah]; *Lloyd, Ibis*, 1873, p. 415 [Kattiawar]; *Adam, S. F.* i. p 391 (1873) [Sambhur Lake]; *Ball, S. F.* ii. p. 426 (1874) [Chota Nagpur], iii. p. 293 (1875) [Palamow]; *Butler, S. F.* iv. p. 4 (1876) [Mt. Aboo, N. Guzerat]; *Fairbank, S. F.* iv. p. 262 (1876) [Khandala Dist.]; *Butler, S. F.* v. p. 231 (1877) [Deesa]; *Hume & Marshall, Game B. Ind.* i. p. 59 (1878); *Elliot, P. Z. S.* 1878, p. 254; *Hume, S. F.* vii. p. 162 (1878) [India, N. of 16° N. lat. & West of 85° E.]; *Ball, S. F.* vii. p. 225 (1878) [Ganges to Godaveri]; *Butler, Cat. B. Sind, etc.* p. 52 (1879); *McInroy, S. F.* viii. p. 492 (1879) [Mysore Dist.]; *Butler, S. F.* ix. p. 421 (1880) [Deccan, S. Mahratta]; *id. Cat. B. S. Bombay*, p. 67 (1880); *Hume, S. F.* x. p. 163 (1881) [Jubbulpur]; *Davidson, S. F.* x. p. 316 (1882) [Khandeish]; *Swinhoe & Barnes, Ibis*, 1885, p. 131 [Central India].

Tetrao indicus, *Gm. S. N.* i. p. 755 (1788); *Bonn. Tabl. Encycl. Méth.* i. p. 201, pl. 92. fig. 1 (1791).

Perdix indica, *Lath. Ind. Orn.* ii. p. 650 (1790).

Ænas indicus, *Vieill. N. D. d'Hist. Nat.* xii. p. 422 (1817).

Pterocles bicinctus, *Wagler, Syst. Av.* p. 279 (1827).
Pterocles pictus, *Hodgson, Icon. ined. in Brit. Mus.*, Gallinæ (no. 782), *& Gray's Zool. Misc.* p. 85 (1844).
Pterocles quadricinctus, *Jerd.* (*nec Temm.*) *Ind. Orn.* pls. 10 & 36 (1847).

Adult male. Lores, forehead, and superciliary stripes white, a wide black band crosses the forehead just in front of the eyes and there is an oval black spot above each eye. Feathers of the top of the head buff, each with a wide black shaft-stripe. Upper back, throat, and chest yellowish buff; rest of back, rump, and upper and under tail-coverts black, barred with white or yellowish white, narrowly tipped with buff. Primaries, primary-coverts, and secondaries brownish black; the primaries narrowly margined with white and a basal patch of dirty white on the outer webs of the secondaries, gradually increasing in extent from the third or fourth to the outmost secondary, which is pale to the extremity; outer webs of the seventh and eighth secondaries crossed by one, and the ninth and tenth by two oblique black bands narrowly margined on both sides with white. A few of the outer median and least wing-coverts yellowish buff. Greater secondary and rest of median coverts barred alternately with wide distinct stripes of white and dark grey and widely tipped with yellowish buff. Scapulars and tail black, barred with rufous buff and widely tipped with yellowish buff. Axillaries grey; the chest is bounded by a moderately wide chestnut band, succeeded by somewhat wider bands of pale yellowish buff and black; the rest of the underparts with narrow bars of white and black. Tail of 16 feathers. Total length 10·8 inches, wing 6·7, tail 3·3, tarsus 0·9.

The *young male* differs from the adult in having the plumage of the upper surface more like that of the female, but the black bars are broken up into vermiculations in most of the feathers; the extremities of the primaries are vermiculated with black and buff, and the chest has only traces of the chestnut band at the base.

Adult female. Differs from the adult male in having no white and black marking on the head, the sides of the neck and base of the throat spotted with black, the chest and upper parts rufous buff closely barred with black, the ends of the scapulars and the greater part of the outer web of the wing-coverts yellowish buff. No pectoral band, and the outer web of the first primary bright buff. In some specimens the black bars on the scapulars are so close together that they run into one another and form black blotches. Total length 10·5 inches, wing 6·2, tail 2·9, tarsus 0·9.

Young females resemble young males, but the underparts are like those of the adult female.

Hab. Peninsula of India.

a–c. ♂ ♀ ad. sk.	Kutch.	Hume Coll.
d, e. ♂ ♀ ad. sk.	Deesa, July (*E. A. Butler*).	Hume Coll.
f. ♀ ad. sk.	Mhow, June.	Lieut.-Col. Swinhoe [P.].
g–r. ♂ ♀ ad. et imm. sk.	Sambhur, Jan., Mar., June (*R. M. Adam*).	Hume Coll.

s–u. ♂ ♀ ad. sk.	Kochaween, March (*R. M. Adam*).	Tweeddale Coll.
v–y. ♂ ♀ ad. sk.	Nowah, Jan., March (*R. M. Adam*).	Hume & Tweeddale Colls.
z. ♂ ad. sk.	Goruh, Dec. (*R. M. Adam*).	Hume Coll.
a'. ♂ ad. sk.	Ajmere, Jan.	Hume Coll.
b'–l'. ♂ ♀ ad. sk.	Gurgaon Dist., Jan., March, June, & Dec. (*A. O. H. & W. N. Chill*).	Hume Coll.
m'. ♀ ad sk.	Kootub, Delhi, Jan.	Hume Coll.
n', o'. ♂ ♀ ad. sk.	N.W. India.	Capt. Stackhouse Pinwill [P.].
p'–s'. ♂ ♀ ad. sk.	Jhansie, Aug. (*F. R. Blewitt*).	Hume Coll.
t', u'. ♂ ad. sk. et st.	Nepal.	B. H. Hodgson, Esq. [P.].
v'. ♀ ad. sk.	Behar.	B. H. Hodgson, Esq. [P.].
w', x'. ♂ ♀ ad. sk.	Raipur, Jan. (*V. Ball*).	Hume Coll.
y', z'. ♂ ad. et ♀ imm. sk.	Hills N. of Khandeish, May.	Hume Coll.
a''. ♂ ad sk.	Khandeish, Aug. (*J. Davidson*).	Hume Coll.
b''–d''. ♂ ♀ ad. sk.	Khandeish.	Tweeddale Coll.
e'', f''. ♂ ad. sk.	Deccan (*Col. Sykes*).	India Museum [P.].
g'', h''. ♂ ♀ ad. sk.	Ahmednugger Dist., Sept. (*S. B. Fairbank*).	Tweeddale Coll.
i''. ♀ ad. sk.	Mysore (*R. G. W. R.*).	Tweeddale Coll.
k''. ♂ ad. sk.	Madras (*R. G. W. R.*).	Tweeddale Coll.
l'', m''. ♂ ♀ ad. sk.		Gould Coll.

8. Pterocles lichtensteini.

Pterocles lichtensteini, *Temm. Pl. Col.* vol. v. pls. 25, 26 [nos. 355, 361] (1825) [Nubia]; *Wagl. Syst. Av.* p. 281 (1827); *Schinz. Nat. Abbild. Vög.* p. 282 (1833); *Gray, List B.* iii. p. 49 (1844); *Gray, Gen. B.* iii. p. 518 (1845); *Rüppell, Vög. N.Ost-Afr.* p. 106 (1845) [Nubia & Kordofan]; *Blyth, J. As. Soc. Beng.* xxiv. p. 304 (1856); *Heuglin, Ibis*, 1859, p. 343 [Danakil & Somali]; *Speke, Ibis*, 1860, p. 247 [Somaliland]; *Gray, List B.* v. p. 3 (1867); *Finsch & Hartlaub, Vög. Ost-Afr.* p. 563 (1870); *Blanford, Geol. Zool. Abyss.* p. 419 (1870) [W. & N.W. of Massowah]; *Finsch, Tr. Z. S.* vii. p. 291 (1870) [Massowah]; *Hume, S. F.* i. p. 219 (1873) [Mehur, Upper Sindh]; *Antin. e Salvad. Cat. Ucc.* p. 138 (1873) [Ansaba, Bogos]; *Heuglin, Orn. N.Ost-Afr.* iii. p. 865 (1873); *Wise, S. F.* iv. p. 230 (1876) [Karachi Dist.]; *Hume & Marshall, Game B. Ind.* i. p. 66; *Elliot, P. Z. S.* 1878, p. 258; *Hume, S. F.* vii. p. 162 (1878) [Sehwan & Eric Hills, Sindh]; *Butler, Cat. B. Sind, etc.* p. 52 (1879); *Tufnell, S. F.* ix. p. 202 (1880) [Baluchistan]; *Salvad. Ann. Mus. Civ. Genov.* xxi. p. 209 (1884) [Ambo-Karra]; *Yerbury, Ibis*, 1886, p. 19 [Aden]; *Sharpe, Ibis*, 1886, p. 166 [Muscat]; *Salvad. Ann. Mus. Civ. Genov.* xxvi. p. 305 (1888) [Shoa]; *Sharpe, Ibis*, 1892, p. 549 [Sük].

Adult male. Resembles *P. fasciatus*, but has the general ground-colour pale whitish buff and differs in having the throat and neck spotted with black, the rest of the upper parts and the chest closely barred with narrow bands of black; upper breast yellowish buff,

divided in the middle by a narrow dark chestnut band (sometimes black) and separated posteriorly from the rest of the underparts by a black band, giving the breast a four-banded appearance. Outer web of the outer secondaries almost entirely white, with four or more oblique black bars. Secondary and median coverts white, tipped with yellowish buff and barred with black. Tarsi pure white. Tail of 14 feathers. Total length 10·3 inches, wing 7, tail 2·8, tarsus 1·1.

An *immature male* differs from the above in having the spots on the throat and neck small and indistinct, the barring on the chest and upper parts pale and irregular, and only a few adult feathers present among the wing-coverts and scapulars. The chestnut pectoral band represented by a couple of feathers in the middle of the breast and the terminal black band wanting, and the tips of the primaries pale buff vermiculated with brownish black.

Adult female. Differs from the adult male in having the whole chest and breast narrowly barred with black, the barring on the upper parts of the body much finer and closer; and the ends of the scapulars, secondary, and median coverts whitish buff. Total length 9·7 inches, wing 7, tail 2·8, tarsus 1·1.

Hab. N.E. Africa; S.W. Asia; ranging from Kordofan, Nubia, Abyssinia, Somaliland, and the Sük country to the Western portions of Sindh.

a–c. ♂ ♀ ad.; ♀ imm. sk.	Eric Hills, Sindh, Feb., March.	Hume Coll.
d. ♀ ad. sk.	Mehur, Upper Sindh, Jan. (*A. O. H.*).	Hume Coll.
e. ♂ ad. sk.	Muscat.	Col. Mills [P.].
f, g. ♂ ♀ ad. sk.	Near Bir Ahmed, Aden, Dec.	Lieut.-Col. Yerbury [P.].
h. ♂ ad. sk.	Near Lahij, Aden, Jan.	Lieut.-Col. Yerbury [P.].
i. ♂ ad. sk.	5 miles from Lahij, Aden, March (*Yerbury*).	Hume Coll.
k. ♂ ad. sk.	Jeddah.	H. H. Calvert, Esq. [C.].
l, m. ♂ ♀ ad. sk.	Jeddah (*Zohrab*).	Shelley Coll.
n, o. ♂ ♀ ad. sk.	Midian.	Capt. Burton [P.].
p. ♂ ad. sk.	Ailat, Samhar, June.	W. T. Blanford, Esq. [P.].
q. ♀ ad. sk.	Ain, Lebka R., Samhar, July.	W. T. Blanford, Esq. [P.].
r–u. ♂ ♀ ad.; ♂ imm. sk.	Amba, Tigré, Aug. (*W. Jesse*).	Tweeddale Coll.
v. ♀ ad. sk.	Bogosland.	Shelley Coll.
w, x. ♂ ♀ ad. st.	N. Africa.	Purchased.
y. ♂ ad. sk.	No locality.	Zool. Soc. Coll.
z. Skeleton.	No locality.	
a'. Skeleton.	No locality.	Salvin-Godman Coll.

9. Pterocles bicinctus.

Double-banded Grous, *Lath. Gen. Hist.* viii. p. 259 (1823).
Pterocles bicinctus, *Temm. Pig. et Gall.* iii. pp. 247, 713 (1815);

Steph. Shaw's Gen. Zool. xi. p. 307 (1819); *Gray, Gen. B.* iii. p. 518 (1845); *Strickl. & Sclat. in Jard. Contr. Orn.* 1852, p. 157; *Layard, B. S. Afr.* p. 278 (1867) [Kuruman & Colesberg, Orange R.]; *Gray, List B.* v. p. 2 (1867); *Ayres, Ibis,* 1869, p. 298; *id. Ibis,* 1871, p. 269 [Limpopo R.]; *Gurney ed. Andersson's B. Damaraland,* p. 241 (1872) [Damara & Gt. Namaqualand]; *Buckley, Ibis,* 1874, p. 385 [Limpopo to Matabele]; *Elliot, P. Z. S.* 1878, p. 255; *Bocage, Orn. Angola,* p. 395 (1881) [Biballa, Capangombe, Humbe]; *Sharpe, in Oates' Matabelel.* p. 323 (1881); *Ayres, Ibis,* 1886, p. 292 [Limpopo R.].

Œnas bicincta, *Vieill. N. Dict. d'Hist. Nat.* xii. p. 421 (1817).

Adult male. Head, upper back, and chest as in *P. fasciatus*; rest of back, rump, and upper tail-coverts blackish brown, slightly tipped with white and irregularly barred and marked with rufous buff. Scapulars the same, but the rufous bars are very irregular in shape and direction, and each feather has a rounded terminal white blotch, giving the upper parts a general spotted appearance; wings as in *P. fasciatus*, but all the secondaries are brownish black on the outer web to the base and the outer ones are ornamented with one or two oblique white bands; the secondary and some of the inner median coverts are blackish brown, somewhat widely tipped with white. The chest is separated from the upper breast by a white and black zone, otherwise the plumage of the underparts is as in *P. fasciatus*. Tail of 16 feathers. Total length 9·7 inches, wing 6·9, tail 3·3, tarsus 0·9.

Adult female. Resembles the adult female of *P. fasciatus*, but the black barring on the upper surface and chest is wider and much less regular and the lesser and median wing-coverts and scapulars are tipped with white; the terminal black bars on the feathers of the upper back, neck, and chest are bridge-shaped, giving these parts a spotted appearance. Total length 9·8 inches, wing 6·6, tail 3·2, tarsus 0·9.

Hab. S. Africa; extending east to the Transvaal, west to Mossamedes, and south to the Orange River *.

a, b. ♂ ad. st.	S. Africa.	Sir A. Smith [P.].
c. ♀ ad. sk.	S. Africa.	Purchased.
d, e. ♂ ♀ ad. sk.	Mahalapsi R., near Shoshong, Aug. (*Oates*).	Capt. G. E. Shelley [P.].
f, g. ♂ ♀ ad. sk.	Limpopo R., May, June (*T. Ayres*).	J. H. Gurney, Esq. [P.].
h, i. ♂ ♀ ad. sk.	Transvaal, July (*T. E. Buckley*).	Shelley Coll.
k. ♀ ad. sk.	Natal (*T. Ayres*).	Tweeddale Coll.
l. ♀ ad. sk.	Cape.	Sir A. Smith [P.].

* The specimens from Damaraland, in the Museum, are considerably lighter than those from S.E. Africa, and have the rufous bars and markings on the upper parts much paler and reduced in width, while the ground-colour is dirty grey. The Kuruman bird forms a link so entirely intermediate between the two forms that there is no doubt a larger series of specimens from intermediate localities will show that they merge gradually into one another and are not really separable.

m. ♂ ad. sk.	Kuruman, Nov.	F. N. Streatfield, Esq. [P.].
n–q. ♂ ♀ ad. sk.	Damaraland, Sept., Oct., Nov. (*C. J. Andersson*).	Tweeddale Coll.

10. Pterocles quadricinctus.

Pterocles quadricinctus, *Temm. Pig. et Gall.* iii. pp. 252 and 713 (1815) [Coromandel Coast!]; *Steph. Shaw's Gen. Zool.* xi. p. 309 (1819); *Wagl. Syst. Av.* p. 280 (1827); *Hartl. Orn. W.-Afr.* p. 205 (1857) [Senegambia, Kordofan, Abyssinia]; *Elliot, P. Z. S.* 1878, p. 257.

Pterocles bicinctus, *Licht. Verz. Doubl.* p. 65 (1823) [Nubia]; *Gray, List B.* iii. p. 49 (1844); *Hartlaub, Abh. Nat. Hamb.* 1852, p. 38.

Œnas bicinctus, *Vieill. Gal. Ois.* iii. p. 60, pl. 220 (1825).

Pterocles indicus, *Licht. Verz. Doubl.* p. 65 (1823).

Pterocles tricinctus, *Swains. Orn. W. Afr.* p. 222, pl. xxiii., ♀ (1837): *Gray, List B.* v. p. 2 (1867) [W. Africa]; *Heuglin, Orn. N.Ost-Afr.* iii. p. 867 (1873) [Gujon, Bissao]; *Shelley, P. Z. S.* 1888, p. 48 [Lado]; *Sharpe, Ibis,* 1892, p. 549 [Sŭk].

Adult male. Closely resembles the male of *P. fasciatus,* from which it only differs in the marking of the greater secondary and inner median coverts, which, instead of being barred alternately with wide distinct bars of white and grey and widely margined with yellowish buff, are yellowish buff, with a black bar narrowly edged on either side with white across the external third of each feather. Tail of 16 feathers. Total length 10·2 inches, wing 7·1, tail 3·3, tarsus 0·95.

An *immature male* differs from the adult in having the back and sides of the neck still barred and the sides of the throat spotted like the female, while the pectoral band is only partially apparent on the right side, and the primaries are widely tipped with buff mottled with black.

Adult female. Differs from that of *P. fasciatus* in having the front of the neck and the chest uniform buff without black bars; otherwise the plumage is nearly similar, except that the black bars on the scapulars are wider and less numerous and the greater secondary coverts and outer median coverts have a black bar across the last third, as in the male, but the white margins are wanting. Total length 10·1 inches, wing 6·8, tail 3·1, tarsus 0·95.

In *less mature* specimens many of the feathers of the chest have a narrow subterminal black band, showing an approach to the adult female of *P. fasciatus.*

Hab. Africa, ranging from Senegambia to Abyssinia.

a. ♂ ad. st.	West Africa.	Major Rickett [P.].
b, c. ♂ ad.; ♀ imm. sk.	West Africa.	Purchased.
d–f. ♂ ad.; ♀ imm. sk.	Gambia.	Shelley Coll. and Purchased.
g. ♀ ad. st.	Gambia.	
h–k. ♂ ♀ ad.; ♂ imm. sk.	Lado.	Emin Pasha [P.].
l. Skeleton.	Bissao, W. Africa.	Eyton Coll.

Order VII. GALLINÆ.

Maxillo-palatines not coalesced with one another or with the vomer *; nasals holorhinal; true basipterygoid processes absent, but represented by sessile facets situated far forward on the sphenoidal rostrum.

Episternal process of the sternum perforated to receive a process from the base of the coracoids; two deep notches on each side of the posterior margin of the sternum; external xiphoid processes bent outwards over the hinder ribs and with expanded extremities.

Bill short and stout, the culmen arched and overhanging the mandible.

Hallux always present, but varying in size and position.

Oil-gland tufted, nude or absent. Well-developed after-shafts to the feathers of the body. Fifth secondary quill present †.

Nestling born covered with down and able to run a few hours after being hatched.

Range. Cosmopolitan.

Key to the Families.

I. Hallux raised above the level of the other toes. (ALECTOROPODES.)

a. Nostrils wholly, tarsi half or entirely hidden by feathers and never armed with spurs; toes naked and pectinate or feathered ..... **Tetraonidæ**, p. 34.

b. Nostrils never hidden by feathers; tarsi partially or wholly ‡, and toes entirely naked; the latter never pectinate, the former often armed with spurs ..... **Phasianidæ**, p. 94.

II. Hallux on a level with the other toes. (PERISTEROPODES.)

c. Oil-gland nude ..... **Megapodiidæ**, p. 445.

d. Oil-gland tufted ..... **Cracidæ**, p. 473.

Suborder I. ALECTOROPODES.

Inner notch of the sternum more than half the length of the entire sternum.

The hallux raised above the level of the other toes, and its basal phalanx much shorter than that of the third toe.

* In some of the *Cracidæ* they are said to unite in the middle line with an ossified septum; but I have not been able to find this in any specimens examined.

† Said to be absent in *Megapodius rubrifrons* (= *M. eremita*): see Sclater, Ibis, 1890, p. 81.

‡ The upper part of the tarsus is feathered in *Lerwa*.

Family I. TETRAONIDÆ.

Nostrils densely feathered. Tarsi and toes entirely feathered, or only the tarsi feathered, or only the upper half of the tarsi feathered. In the groups with naked feet the sides of the toes pectinate. No spurs ever developed on the tarsi in either sex *.

Key to the Genera †.

A. Tarsi, feet, and toes densely covered with feathers ..... 1. LAGOPUS, p. 35.

B. Tarsi entirely feathered; toes naked, pectinate on the sides.

a. Outer tail-feathers longer or very much longer than the middle pair, and curved outwards in the male; tail composed of 18 feathers ..... 2. LYRURUS, p. 53.

b. Outer tail-feathers equal to or more than two thirds the length of the central pair.

a'. No elongate tufts of feathers on each side of the neck.

a''. Outer primaries not attenuated and sickle-shaped.

a'''. No inflatable air-sac on each side of the neck in the male.

a^4. Tail composed of 18 feathers, size very large ..... 3. TETRAO, p. 59.

b^4. Tail composed of 16 feathers, size small ..... 4. CANACHITES, p. 68.

b'''. An inflatable air-sac on each side of the neck; tail composed of 20 feathers ..... 6. DENDRAGAPUS, [p. 73.

b''. Outer primaries attenuated and sickle-shaped; no inflatable air-sacs on the sides of the neck; tail composed of 16 feathers ..... 5. FALCIPENNIS, p. 72.

b'. An elongate tuft of feathers and an inflatable air-sac on each side of the neck ..... 7. TYMPANUCHUS, [p. 77.

c. Outer tail-feathers two thirds or less than two thirds the length of the central pair.

c'. Tail very long, central feathers elongate and sharp-pointed; an inflatable air-sac on each side of the neck; tail composed of 20 feathers ..... 8. CENTROCERCUS, [p. 80.

d'. Tail moderately long, central feathers parallel-edged and truncate; no inflatable air-sac on each side of the neck; tail composed of 18 feathers .. 9. PEDIOCÆTES, p. 82.

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* For the osteology of the American Tetraonidæ see Shufeldt, Bull. U.S. Geol. Surv. vi. pp. 309–350, pls. v.–xiii. (1882).

† The generic characters are founded on the males, and are thus not always applicable to the females.

C. Tarsi partially feathered, the lower part being entirely naked, toes pectinate on side.
d. A ruffled frill of feathers on each side of the neck; sexes similar; tail composed of 18 feathers ..... 10. BONASA, p. 85.
e. No ruffled frill on each side of the neck; sexes different; tail composed of 16 feathers ..... 11. TETRASTES, p. 89.

1. LAGOPUS.

	Type.
Lagopus, *Briss. Orn.* i. pp. 181, 216 (1760)	L. albus.
Keron, *Montin, Phys. Sälsk. Handl. Stockh.* i. p. 155 (1776)	L. mutus.
Oreias, *Kaup, Nat. Syst.* p. 177 (1829)	L. scoticus.
Attagen, *Kaup, Nat. Syst.* p. 170 (1829)	L. rupestris.
Acetinornis, *Bonap. C. R.* xlii. p. 880 (1856)	L. scoticus.

Tail composed of 16 feathers, moderately long, subequal, and rounded at the extremity.

1st primary much shorter than the 2nd, falling between the 6th and 7th; 4th primary slightly the longest.

Tarsus shorter than middle toe and claw.

Feet and toes densely covered with feathers.

Axillaries fairly long.

Range. Circumpolar.

Key to the Species.

A. Outer tail-feathers black, with the base and tip more or less white.
1. Primaries always blackish brown ..... *scoticus*, p. 35.
2. Primaries always white.
a. The white, if present, on the outer web of the outer tail-feathers confined to the basal portion.
a. Bill much stouter and larger; wing about 8 inches ..... *lagopus*, p. 40.
β. Bill much more slender; wing about 7·5 inches ..... *mutus*, p. 44. / *rupestris*, p. 48.
b. The white on the outer web of the outer tail-feathers covering at least the basal two thirds ..... *hyperboreus*, p. 51.
B. Outer tail-feathers white ..... *leucurus*, p. 52.

1. Lagopus scoticus.

Lagopus altera, *Albin, N. H. Birds*, i. pls. 23 & 24 (1738).
La Gelinote d'Ecosse, *Briss. Orn.* i. p. 199, pl. xxii. fig. 1 (1760).
Red Grouse, *Lath. Gen. Syn.* ii. pt. ii. p. 746 (1783), Suppl. i. p. 216 (1787); *id. Gen. Hist. B.* viii. p. 247 (1823); *Yarrell, Brit. B.* ii. p. 315 (1843).
Tetrao scoticus, *Lath. Gen. Syn. Suppl.* i. p. 290 (1787); *id. Ind. Orn.* ii. p. 641 (1790); *Penn. Brit. Zool.* i. p. 356, pl. 57 (1812); *Schinz, Nat. Abbild. Vög.* p. 280, pl. 105 (1833); *Thomps. Nat. Hist. Irel.* i. p. 47 (1850); *Seebohm, Hist. Brit. B.* ii. p. 428, pl. 20 (1884).

Tetrao lagopus, var. γ, *Gm. S. N.* i. pt. ii. p. 750 (1788).
Tetrao saliceti, *Temm. Pig. et Gall.* iii. pp. 208, 709 (1815) [part.]; *id. Man. d'Orn.* ii. p. 471 (1820).
Lagopus scoticus, *Leach, Syst. Cat.* p. 27 (1816); *Vieill. N. Dict. d'Hist. Nat.* xviii. p. 206 (1817); *Steph. in Shaw's Gen. Zool.* xi. p. 293, pl. 20 (1819); *Vieill. Gal. Ois.* ii. p. 62, pl. 221 (1825); *Jard. Nat. Lib., Orn.* iv. p. 145, pl. xviii. (1834); *Gould, B. Eur.* iv. pl. 252 (1837); *Macgill. Brit. B.* i. p. 169 (1837); *Gray, List of B.* pt. iii. *Gall.* p. 47 (1844); *Watters, N. Hist. B. Irel.* p. 126 (1853); *Elliot, Mon. Tetr.* pl. xix. (1865); *More, Ibis*, 1865, p. 427; *Gray, List Gallinæ Brit. Mus.* p. 91 (1867); *Degl. & Gerbe, Orn. Europ.* ii. p. 35 (1867); *Gray, Hand-l. B.* ii. p. 277 (1870); *Fritsch, Vög. Europ.* p. 279 (1870), pl. 30. fig. 5 (1871); *R. Gray, B. West Scotl.* p. 232 (1871); *Dress. B. Eur.* v. p. 165, pl. 479 (1873); *Gould, B. Gt. Brit.* iv. pl. vii. (1873); *Booth, Rough Notes*, ii. pl. and text (1881–7); *Buckl. P. Z. S.* 1882, p. 112; *Saund. ed. Yarr. Brit. B.* iii. p. 73 (1884); *Olphe-Gall. Faun. Orn. Eur. Occ.* fasc. 37–40, p. 50 (1886); *Bell, Zool.* 1887, p. 265; *Saund. Ill. Man. Brit. B.* p. 481 (1889); *Lilford, Col. Fig. B. Brit.* pt. xviii. (1891); *Millais, Game B.* pp. 43–62, pls. & woodcuts (1892).
Oreias scoticus, *Kaup, Nat. Syst.* p. 177 (1829).
Grouse, *Selby, Brit. Orn.* i. pt. ii. pl. 59. fig. 1 (1833).
Tetrao saliceti scoticus, *Schl. Rev. Crit.* p. 76 (1844).
Lagopus persicus, *Gray, Gen. B.* iii. p. 517, pl. 133 (1845); *id. List of B.* pt. iii. *Gall.* p. 48 (1844); *Elliot, Mon. Tetr.* pl. xx. (1865).
Tetrao lagopus, *Paton, Scot. Nat.* i. p. 113 (1871–2) [Perthshire].

Before attempting to give any description of this species, which is subject to great variation, we must state that in the *male* three extreme types of plumage are recognizable—a *red* form, a *black* form, and a *white-spotted* form. The first of these, in which the general colour is red without any white spots, is mostly found in the low grounds of Ireland, the Outer Hebrides, and west of Scotland; of the second or black form typical specimens are rarely met with ,and it is usually found mixed with either the red or white-spotted forms, but most often with both, and specimens in mixed plumage are those most commonly met with; the third or white-spotted form is spotted all over the breast and belly, and sometimes on the head and upper parts, with white; the most typical specimens of this form are usually found in the high ground of the north of Scotland.

In the *female* five distinct types are recognizable—the *red*, the *black*, the *white-spotted*, the *buff-spotted*, and the *buff-barred* forms. The first two are the rarest: the *white-spotted* form occurs as in the male; the *buff-spotted* form, which is the commonest and that usually met with, has the feathers of the upper parts spotted at the tip with yellowish buff. The fifth or *buff-barred* form, which is met with towards the south of Ireland, closely resembles in *winter* the ordinary female in breeding-plumage, and has the upper parts rather coarsely barred with buff, rufous-buff, and black, and the belly yellowish buff coarsely barred with black and tipped with white.

Bearing in mind the above remarks, the changes in plumage in the ordinary forms may be briefly described as follows:—

Adult male (*winter and summer plumages*). General colour above

black, with finely mottled bars of dark chestnut; head and neck dark chestnut; top of the head and back of the neck marked with black; feathers of the mantle, lower back, rump, and upper tail-coverts with narrow transverse bars and vermiculations of black and chestnut, the latter colour usually predominating. As usual in this group of birds, the autumn plumage is rarely completely donned, a greater or lesser number of the summer feathers being retained. From the evidence before me it is certain that no change is made in the plumage of the male till after the breeding-season, and that in the month of July he commences gradually moulting into his autumn plumage, which is perfect by about the middle of August. In summer the white spots on the underparts are absent or much less prominent; but this is accounted for by the wearing off of the ends of the feathers.

Adult male (*autumn plumage*). The upper parts are black, marked and spotted with rufous or rufous-buff and edged all round with paler buff; the markings are usually more or less concentric on the mantle and lower back, and the chest is more or less strongly barred and marked with black and buff.

In September the first feathers of the winter plumage begin to appear on the back and the barred chest-feathers are mostly or entirely replaced by dark chestnut feathers narrowly barred with black.

Males in full breeding-plumage can be distinguished from December specimens by their faded plumage and the more worn edges of the feathers. Total length 15 inches, wing 8·3, tail 4·4, tarsus 1·6.

Adult female (*autumn and winter plumages*). Upper parts black, with narrow irregular bars of rufous and buff spots at the tips of most of the feathers; chest-feathers narrowly and often irregularly barred with rufous and black, usually more or less tipped with buff, and with a buff patch along the basal part of the shaft. This plumage is retained throughout the autumn and winter; in early spring the feathers of the summer plumage begin to appear, and by the end of April the summer plumage is complete.

Adult female (*summer plumage*). Upper parts black, coarsely mottled and margined with buff or rufous buff; most of the markings are more or less concentric, and the buff margins to the feathers of the back and scapulars give the bird a more or less scaled appearance; most of the feathers of the neck, chest, sides, flanks, and under tail-coverts are buff, coarsely and irregularly barred with black *. All five types don this breeding-plumage and, at this season, are very similar

* There is no doubt that many of these buff feathers coarsely barred with black are not produced by a fresh moult, but are actually the same feathers which in autumn and winter are finely barred with black and rufous. The change of pattern occurs in early spring, and the mode by which this alteration takes place is well shown in February and March specimens. First a buff shaft-stripe extends towards the end of the shaft, and gradually resolves itself into transverse buff bars, and meanwhile the intermediate spaces become black.

in general appearance. In July the autumn plumage begins to appear, and is complete about the end of August or the beginning of September; and, so far as I can judge from the material before me, I have no doubt that no further change takes place until the following spring, as birds killed in the beginning of September are perfectly similar to November, December, and February specimens. Total length 14·5 inches, wing 7·7, tail 4, tarsus 1·5.

This species is distinguished from all others of the genus by having the primaries brownish black.

From the above remarks it will be seen that two very extraordinary facts appear to have been ascertained:—

1. That the male has no distinct *summer* plumage, but changes in *autumn* and again in *winter*, retaining the latter plumage till the following autumn after the breeding-season.

2. That the female has a distinct *summer* plumage, which is complete by the end of April, also a distinct *autumn* plumage, but never assumes a distinct *winter* garb, retaining her *autumn* plumage till the following spring.

Immature birds after November cannot be distinguished from the adults; in the end of August the upper parts and chest are generally like those of the adult female in breeding-plumage, but the buff and rufous markings are not so coarse; the breast and rest of underparts vary according to the type to which the birds belong.

Varieties and albinos are rather rare *.

Hab. Great Britain, Ireland, the Hebrides and Orkneys.

a, b. ♂ ad. et pull. sk.	Orkney Is., June.	Gould Coll.
c–g. ♂ ♀ ad. st. et pull. st.	Orkney Is.	Purchased.
h–j. ♀ ad., ♂ imm. sk.	Lewis, Outer Hebrides, Sept., Oct. (*F. D. G. & E. Kirkpatrick*).	Salvin-Godman Coll.
k. ♂ ad. sk.	Benbecula, Outer Hebrides, Dec.	Sir W. Smyth, Bart. [P.].
l, m. ♂ ♀ ad. sk.	Scotland.	Montagu Coll.
n, o. Pull. sk.	Scotland.	Salvin-Godman and Gould Colls.
p. ♂ ad. sk.	Poyntzfield, Cromarty, Jan.	G. St. Quintin, Esq. [P.].
q–t. ♂ ♀ ad. sk.	Beauly, Inverness-shire, May.	Lord Lovat [P.].
u. ♀ ad. st. [albino].	Nairnshire.	Earl of Cawdor [P.].
v, w. ♂ ♀ ad. sk.	Nairnshire, Dec.	H. F. Rose, Esq. [P.].
x. ♀ ad. sk. [albino].	Dunphail, Morayshire, Aug.	W. R. Ogilvie Grant, Esq. [P.].

* There is a popular idea among sportsmen that the Irish birds are much heavier than those from England and Scotland, but I do not find this to be the case. Three males from Co. Mayo average 23 oz. each and three females 21 oz. Of numerous specimens from various parts of Great Britain the average weight of males is 23½ oz. and of females 21½ oz. One male from Perthshire weighed 28 oz., but this of course is exceptional.

y–*d'*. ♂ ♀ ad. sk.	Argyllshire, Dec.	F. Menteith Ogilvie, Esq. [P.].
e', *f'*. ♂ ad. sk.	Loch Lomond, May.	Duke of Montrose [P.].
g'. ♀ ad. sk.	Loch Long, Sept.	W. R. Ogilvie Grant, Esq. [P.].
h'. ♂ ad. sk. [var.].	Loch Sween, Aug.	C. C. S. Parsons, Esq. [P.].
i'. ♂ ad. sk.	Perthshire.	Editor of 'Land and Water' [P.].
k'. ♀ ad. sk. [pale var.].	Perthshire, Oct.	Howard Saunders, Esq. [P.].
l'. ♂ ad. st.	Rohallion, Perthshire.	Gould Coll.
m', *n'*. ♂ ♀ ad. sk.	Tyndrum, Perthshire, Dec.	Marquis of Breadalbane [P.].
o', *p'*. ♂ ♀ ad. sk.	Buchanty, Perthshire, Dec.	Capt. W. A. Drummond Moray [P.].
q'. ♂ ad. sk.	Tillicoultry, Clackmannan, Nov.	Major R. G. Wardlaw Ramsay [P.].
r', *s'*. ♀ ad. sk.	Dunipace, Larbert, Stirlingshire, Nov.	J. A. Harvie Brown, Esq. [P.].
t'–*w'*. ♂ ♀ ad. sk.	Ayrshire, April.	Editor of 'Land and Water' [P.].
x'–*z'*. ♂ ad. sk.	Ayrshire, Aug.	Sir Richard Wallace [P.].
a'', *b''*. ♂ ♀ ad. sk.	Stranraer, Wigtonshire, June.	Sir W. Wallace [P.].
c'', *d''*. ♂ ♀ ad. sk.	Yorkshire.	India Museum [P.].
e'', *f''*. ♂ ♀ ad. sk.	Settle, Yorkshire, Dec.	Purchased.
g''–*n''*. ♂ ♀ ad. sk.	Otley, Yorkshire, May, Sept.	Lord Walsingham [P.].
o''. ♀ ad. sk.	Ireland.	India Museum [P.].
p''. ♀ ad. sk.	Ballynahinch, Co. Down, Aug. (*F. D. G.*).	Salvin-Godman Coll.
q'', *r''*. ♂ ♀ ad. sk.	Bellmullet, Co. Mayo, Nov.	F. J. Simpson, Esq. [P.].
s'', *t''*. ♂ ♀ ad. sk.	Tralee, Co. Limerick, Feb.	Gould Coll.
u'', *v''*. ♀ ad. st.	London Market.	Purchased.
w'', *x''*. Pull. st.	No locality.	Purchased.
y''. ♀ ad. sk. [var.].	No locality.	Salvin-Godman Coll.
z''. ♀ imm. sk.	[Persia *.]	Purchased. (Type of *L. persicus*, Gray.)
a^3, *b*^{3}. Skeletons.		
c^3, *d*^{3}. Sterna.		

Hybrid between Lagopus scoticus *and* Gallus domesticus.

Grouse × Bantam Fowl, *Millais, Game B.* p. 59, woodcut (1892).

? *Hybrid between* Lagopus scoticus *and* L. mutus.

Newt. P. Z. S. 1878, p. 793 [Sutherland]; *Millais, Game B.* p. 60, pl. (1892).

Hybrid between L. scoticus *and* L. tetrix. *See* p. 57.

* It is not unlikely that Mr. G. R. Gray misunderstood the person from whom he obtained this specimen and that the locality was in reality Perthshire, certainly not Persia.

2. Lagopus lagopus.

White Partridge, *Edw. N. H. Birds*, ii. pl. 72 (1747).
La Gelinote blanche, *Briss. Orn.* i. p. 216 (1760).
Tetrao lagopus, *Linn. S. N.* i. p. 274 (1766); *Forst. Phil. Trans.* lxii. p. 390 (1772); *Gm. S. N.* i. pt. ii. p. 749 (1788); *Pall. Zoogr. Rosso-As.* ii. p. 63 (1811).
Lagopède de la Baie d'Hudson, *Buff. Ois.* ii. p. 276 (1771).
White Grouse, *Lath. Gen. Syn.* ii. pt. ii. p. 743 (1783); *Penn. Arct. Zool.* ii. p. 308 (1785).
Rehusak, *Penn. Arct. Zool.* ii. p. 316 (1785), i. p. 369 (1792); *Lath. Gen. Syn. Suppl.* i. p. 216 (1787); *id. Gen. Hist. B.* viii. p. 247 (1823).
Tetrao albus, *Gm. S. N.* i. pt. ii. p. 750 (1788); *Lath. Ind. Orn.* ii. p. 639 (1790); *Bechst. Nat. Deutschl.* iii. p. 513 (1793); *Meyer, Vög. Liv- u. Esthl.* p. 152 (1815); *Bonap. Am. Phil. Trans.* iii. p. 393 (1830); *Naum. Nat. Vög. Deutschl.* vi. p. 381, pl. 159 (1833).
Tetrao lapponicus, *Gm. S. N.* i. pt. ii. p. 751 (1788); *Lath. Ind. Orn.* ii. p. 640 (1790); *Temm. Pig. et Gall.* iii. pp. 225, 707 (1815).
Tetrao rehusak, *Bonn. Encycl. Méth.* i. p. 204 (1791).
Willow Partridge, *Hearne, Journ.* p. 411 (1795).
Tetrao cachinnans, *Retz. Faun. Suec.* p. 210 (1800).
Tetrao saliceti, *Temm. Pig. et Gall.* iii. pp. 208, 709 (1815) [part.]; *id. Man. d'Orn.* ii. p. 471 (1820); *Sabine, App. Frankl. Narr.* p. 681 (1823); *Rich. App. Parry 2nd Voy.* p. 347 (1824); *Nutt. Man. Orn.* i. p. 674 (1832); *Schinz, Nat. Abbild. Vög.* p. 280, pl. 105 (1833); *Aud. Orn. Biog.* ii. p. 528, pl. 191 (1834); *Godman, Ibis*, 1861, p. 85 [Bodö]; *Bree, B. Europ.* iii. p. 212, pl. (1867); *Adams, Ibis*, 1878, p. 436 [Norton Sound].
Tetrao subalpinus, *Nilss. Orn. Suec.* i. p. 307 (1817).
Lagopus albus, *Steph. in Shaw's Gen. Zool.* xi. p. 292 (1819); *Boie, Isis*, 1822, p. 557; *Aud. B. Amer.* v. p. 114, pl. 299 (1842); *Gray, List of B.* pt. iii. *Gall.* p. 47 (1844); *Midd. Sibir. Reis.* ii. pt. ii. p. 190 (1851); *Brandt, in Hofmann, N. Ural Exp.* ii. App. p. 68 (1856); *Baird, B. N. Amer.* p. 633 (1858); *Schr. Reis. Amur-L.* i. p. 395 (1859); *Coues, P. Ac. Philad.* 1861, p. 227; *Blakist. Ibis*, 1862, p. 8 [Saskatchewan R.]; *Radde, Ost-Sib.* ii. p. 294 (1863); *Blakist. Ibis*, 1863, p. 127; *Fitz. Atl. Nat. Vög.* fig. 245 (1864); *Elliot, Mon. Tetr.* pls. xvii. & xviii. (1865); *Degl. & Gerbe, Orn. Europ.* ii. p. 37 (1867); *Gray, List Gallinæ Brit. Mus.* p. 90 (1867); *Dall & Bann. Tr. Chic. Acad.* i. p. 287 (1869) [N.W. Alaska]; *Gray, Hand-l. B.* ii. p. 277 (1870); *Fritsch, Nat. Vög. Eur.* p. 278 (1870), pl. xx. figs. 1 & 4 (1871); *Collett, Forh. Vid. Selsk. Christ.* 1868, p. 159, 1872, p. 237 [N. Norway]; *Goebel, J. f. O.* 1873, p. 422; *Finsch, Abh. nat. Ver. Brem.* iii. p. 62 (1873); *Alst. & Brown, Ibis*, 1873, p. 66 [Archangel]; *Dress. B. Eur.* v. p. 183, pls. 483, 484 [part.] (1874); *Baird, Brew., & Ridgw. N. Amer. B.* iii. p. 457 (1874); *Palm. J. f. O.* 1876, p. 42 [Finland]; *Taez. Bull. Soc. Zool. Fr.* i. p. 242 (1876) [E. Siberia]; *Seebohm & Brown, Ibis*, 1876, p. 220 [L. Petchora]; *Taez. Bull. Soc. Zool. Fr.* ii. p. 153 (1877) [Poland]; *Finsch, Ibis*, 1877, pp. 58, 60 [Obi R.]; *Coues, Bull. Nutt. Orn. C.* iii. p. 41 (1878) [New York]; *Seebohm, Ibis*, 1879, p. 148 [Yenisei]; *Finsch, Verh. Ges. Wien*, xxix. p. 234 (1880); *Brandt, J. f. O.* 1880, p. 240 [St. Petersburg, Helsingfors]; *Merriam, Bull. Nutt.*

Orn. C. vi. p. 233 (1881) [New York]; *Büchn. & Pleske, Beitr. Orn. St. Pét.* p. 78 (1881); *Mayn. B. E. N. Amer.* p. 348 (1881) [part.]; *Seebohm, Ibis*, 1882, p. 379 [Archangel]; *Merriam, Bull. Nutt. Orn. C.* vii. p. 238 (1882) [Canada]; *Hartl. J. f. O.* 1883, p. 276 [Chilcat, Alaska]; *Bogd. Consp. Av. Ross.* fasc. i. p. 32 (1884); *Coues, Key*, p. 586 (1884); *Stejn. Am. Nat.* 1884, p. 774; *id. Auk*, i. p. 225 (1884); *Murd. Auk*, ii. p. 63 (1885) [Pt. Barrow]; *Merriam, Auk*, ii. p. 80 (1885); *Pleske, Uebers. Vog. Kolu*, p. 301 (1886); *Meyer, Vog.-Skel.* pl. ciii. (1886); *Turner, Pr. U.S. Nat. Mus.* viii. p. 245 (1886) [Fort Chimo, Ungava]; *Seebohm, Ibis*, 1888, p. 347 [Gt. Liakoff Is.]; *Hartw. J. f. O.* 1889, p. 144.

Lagopus lapponicus, *Steph. in Shaw's Gen. Zool.* xi. p. 296 (1819).

Willow Grous, *Lath. Gen. Hist. B.* viii. p. 245 (1823).

Tetrao (Lagopus) saliceti, *Sw. & Rich. Faun. Bor.-Am.* ii. p. 351 (1831); *Ross, Arct. Exp.* p. 28 (1835).

Lagopus subalpinus, *Brehm, Handb. Vög. Deutschl.* p. 517 (1831) *Nilss. Skand. Faun., Fog.* ii. p. 93 (1858); *Olphe-Gall. Faun. Orn. Eur. Occ.* fasc. 37–40, p. 55 (1886).

Lagopus subalpina, *Nilss. Ill. Skand. Faun.* i. pls. 6, 7 (1832); *Sundev. Svensk. Fogl.* pl. xxxv. figs. 5 & 6 (1856); *Collin, Skand. Fugle*, p. 421, Suppl. pl. 5 (1877).

Lagopus brachydactylus, *Gould, B. Eur.* iv. pl. 256 (1837); *Olphe-Gall. Faun. Orn. Eur. Occ.* fasc. 37–40, p. 61 (1886).

Lagopus saliceti, *Gould, B. Eur.* iv. pl. 255 (1837): *Cab. J. f. O.* 1886, p. 348 [Germany].

Tetrao brachydactylus, *Temm. Man. d'Orn.* iv. p. 328 (1840).

Tetrao lagopus albus, *Nutt. Man. Orn.* i. p. 816 (1840).

Dal Ripa, *Lloyd, Game B. Sweden & Norw.* p. 121, pl. (1867).

Lagopus lagopus, *Turner, Contr. Nat. Hist. Alaska*, pp. 152–4 (1886); *Seton, Auk*, iii. p. 153 (1886) [W. Manitoba]; *A. O. U. Check-l.* p. 173 (1886); *Ridgw. Man.* p. 199 (1887); *Towns. Auk*, iv. p. 12 (1887) [N. Alaska]; *Nelson, Rep. N. H. Alaska*, p. 131, pl. v. fig. 3 (1887) [N. & W. Alaska]; *Thompson, Pr. U.S. Nat. Mus.* xiii. p. 514 (1891) [Manitoba]; *Hartert, Ibis*, 1892, p. 511 [Dingken, Germany].

Adult male and female [winter plumage]. Pure white; all the tail-feathers with the exception of the middle pair black, with the basal parts and tips white.

Adult male [summer plumage]. Head and neck chestnut, often shading into very dark chestnut, or even black on the chest and upper breast; birds in their first summer plumage (that is, before they have bred) have the chest and upper breast narrowly barred with black, while in the old ones these parts are perfectly uniform: back, scapulars, rump, and upper tail-coverts reddish brown, narrowly barred with black and often edged with buff or whitish; rest of the plumage as in winter specimens. This, of course, is the most complete summer plumage and only found in specimens inhabiting more temperate climates; in birds from high latitudes all the upper parts from the back of the neck remain white, merely interspersed here and there with a few summer feathers.

Adult female [summer plumage]. The whole of the upper parts black, rather narrowly barred and edged with buff; chest, breast, sides, and flanks buff, rather coarsely barred and marked with black;

quills and the outer half of the wing-coverts pure white; middle of the breast and belly usually buff, more or less mixed with white feathers; tail as above, but the middle pair of feathers are black, irregularly barred with rufous.

Adult male [*autumn plumage*]. Throat and chest light brick or pale chestnut colour, usually with finely mottled black cross-bars; the new feathers on the upper parts black with narrow irregular rufous bars, in fact very similar to those of the summer plumage, but the black greatly predominates and the tips are not so conspicuously edged with white and rufous.

Adult female [*autumn plumage*]. Feathers of the chin, throat, and chest similar in colour to those of the male; but, as a rule, largely intermixed with summer plumage; upper parts black, with narrow bars of rufous buff.

Adult male. Total length 15·5 inches, wing 8·1, tail 4·8, tarsus 1·4.

Adult female. Total length 15 inches, wing 7·8, tail 4·3, tarsus 1·35.

Immature specimens are mottled and sometimes blotched with black along the shafts of the primaries.

Young birds resemble the female in breeding-plumage, but the markings on the upper parts are usually more concentric, and most of the feathers of the mantle, scapulars, and wing-coverts have a white spot at the extremity; the primaries are pale brownish grey, mottled along the outer web and round the tips with buff; chin, throat, belly, thighs, and under tail-coverts pale buff.

Hab. N. Europe, N. Asia, Arctic America, Greenland.

a. Imm. sk.	[Iceland], winter.	Purchased.
b, *c*. ♂ ad. et imm. sk.	Norway, Sept.	E. Valpy, Esq. [P.].
d. ♀ ad. sk.	[Norway], March.	J. E. Harting, Esq. [P.].
e. ♂ imm. sk.	Norway, March.	India Museum [P.].
f–*k*. ♂ ad., imm., et pull. sk.	Norway, June, Sept.	Gould Coll.
l. ♂ imm. sk.	Norway, Jan.	E. Hargitt, Esq. [P.].
m. ♀ ad. sk.	Norway, Sept. (*F. D. G.*).	Salvin-Godman Coll.
n. ♂ ad. sk.	S. Norway, Jan. (*P. Godman*).	Salvin-Godman Coll.
o–*q*. ♂ ♀ ad. et pull. sk.	Dovrefjeld Mts., Norway, July.	Gould Coll.
r–*u*. ♂ ad. et ♀ imm. sk.	Tönsæt, Norway, Nov.	Prof. R. Collett [P.].
v–*z*. ♂ ad. et ♂ ♀ imm. sk.	Röros, Norway, Sept.–Nov.	Prof. R. Collett [P.].
a', *b'*. ♂ ad. sk.	Osterdalen, Norway, May, Nov.	Prof. R. Collett [P.].
c'. Pull. sk.	S. Varanger, Norway, July.	Prof. R. Collett [P.].
d'–*f'*. * Ad. sk.	Bodö, Norway, May, June (*F. & P. Godman*).	Salvin-Godman Coll.
g', *h'*. ♂ ♀ ad. sk.	Sweden, summer.	Sir H. Davy [P.].

* May specimen assuming male plumage.

i''–m''. ♂ ad. et imm. sk.	Quickjock, Sweden, May, July, Aug. (*H. Wheelwright*).	Gould Coll.
n'–p'. ♂ ♀ ad. sk. et imm. st.	North Bothnia.	Prof. Wahlberg [C.].
q'. Imm. sk.	Russia, winter.	Gould Coll.
r'. ♀ ad. sk.	Archangel, June (*J. A. H. B.*).	Tweeddale Coll.
s', t'. ♂ imm. et pull. sk.	Archangel, Sept. (*Henke*).	Salvin-Godman and Gould Colls.
u'–a''. ♂ ♀ ad., imm., juv., pull. sk. et st.	Archangel, spring–autumn (*Henke*).	Dr. R. Bowdler Sharpe [P.].
b''–d''. ♂ ♀ ad. sk.	Tobolsk, Ob R., April, July.	Dr. O. Finsch [C.].
e'', f''. ♂ ad. sk.	Omsk, May.	St. George Littledale, Esq. [P.].
g''. ♀ imm. sk.	Dzungaria, Dec.	St. Petersburg Museum [E.].
h'', i''. ♂ ad. sk.	N. America, summer.	Hudson's Bay Co. [P.].
k'', l''. ♂ ♀ ad. sk. et st.	N. America, summer.	Audubon Coll.
m''. Ad. sk.	N. America, winter.	Gould Coll.
n'', o''. Ad. sk. et st.	N. America, winter (*Dr. J. Rae*).	Dr. J. Rae [P.].
p'', q''. ♂ ad. sk. et st.	N. America, summer and winter.	Admiral Sir G. Back [P.].
r''. ♂ ad. sk.	Canada, Dec. (*W. H. Collins*).	Salvin-Godman Coll.
s''–z''. ♂ ♀ ad. et imm. sk.	Godbout, St. Lawrence, Nov., Dec.	Salvin-Godman Coll.
a³–d³. ♂ ad. et pull. sk.	Fort Chimo, Ungava, June, July, Sept. (*L. M. Turner*).	Salvin-Godman Coll.
e³ h³. ♂ ad. et imm. sk.	Hudson's Bay.	Gould Coll.
i³. ♂ ad. sk.	Great Whale R., June.	Gould Coll.
k³, l³. ♂ ♀ ad. sk.	Little Whale R., May.	Gould Coll.
m³–p³. ♂ ♀ ad. sk.	N.W. America, summer and winter.	Capt. Collinson [P.].
q³. Ad. sk.	Fort Resolution.	B. R. Ross, Esq. [P.].
r³. Imm. sk.	Fort Simpson, April.	B. R. Ross, Esq. [P.].
s³, t³. ♂ ♀ ad. sk.	Point Barrow, Alaska, Feb., May (*H. W. Henshaw*).	Salvin-Godman Coll.
u³, v³. ♂ ♀ ad. sk. et st.	Kotzebue Sound, late autumn.	Capt. Kellett and Lieut. Wood [P.].
w³–f⁴. ♂ ♀ ad., imm. et pull. sk.	St. Michael's, Alaska, March, May, June, July, Sept., Oct. (*E. W. Nelson and L. M. Turner*).	Salvin-Godman Coll.
g⁴, ♀ ad. sk.	Kegiktouik, Alaska, Oct. (*E. W. Nelson*).	Salvin-Godman Coll.
h⁴–k⁴. ♂ ♀ ad. et imm. sk.	Nushagak, Alaska, Jan., Nov.	Salvin-Godman Coll.
l⁴. ♀ ad. sk.	[Falkland Is.]. Changing to autumn.	G. Bennett, Esq. [P.].
m⁴, n⁴. Skeletons.		Purchased.

Hybrid between Lagopus lagopus *and* L. mutus.

Lagopus albus × L. mutus, *Collett, P. Z. S.* 1886, p. 236 [Norway].

Hybrid between Lagopus lagopus *and* Tetrastes bonasia.

Bonasa bonasia × Lagopus albus, *Collett, P. Z. S.* 1886, p. 237 [Sweden].

Lagopus bonasioides, *Kolth. Bih. Sv. Ak. Handl.* xiii. Afd. iv. no. 6, 7 pp. pl. (1888).

Hybrid between Lagopus lagopus *and* Lyrurus tetrix. *See* p. 57.

Hybrid between Lagopus lagopus *and* Tetrao urogallus. *See* p. 64.

Subsp. *a.* **Lagopus alleni.**

Lagopus albus, *Mayn. B. E. N. Amer.* p. 348 (1881) [part., Newfoundland].

Lagopus alba alleni, *Stejn. Auk*, i. p. 369 (1884) [Newfoundland]; *Merr. Auk*, ii. p. 201 (1885).

Lagopus lagopus alleni, *Stejn. P. U.S. Nat. Mus.* viii. p. 20 (1885); *A. O. U. Check-l.* p. 173 (1886); *Ridgw. Man.* p. 199 (1887).

This name has been proposed by Stejneger for specimens from Newfoundland, which are said in winter plumage to differ from typical examples of *L. lagopus* in having the shafts of the primaries and secondaries black. We have already seen that black shafts and markings to the primaries are characteristic of the immature bird, and the black shafts to the secondaries, though by no means common, are well marked in a specimen from Russia. It is impossible at present with the material in hand to estimate the value of this character; but in an adult specimen in autumn plumage from Newfoundland the character of the black shafts is well developed and has apparently nothing to do with age. The longest upper tail-coverts are considerably elongated and extend at least two inches beyond the end of the tail; whether this is simply an accidental variety or not is at present unknown.

Hab. Newfoundland.

**a.* ♂ ad. sk. Newfoundland, Sept. J. E. Harting, Esq. [P.].

3. Lagopus mutus.

La Gelinotte blanche, *Daubent. Pl. Enl.* [nos. 129 & 494].

Tetrao lagopus, *Scop.* (*nec Linn.*), *Ann.* i. p. 118 (1769); *Lath. Ind. Orn.* ii. p. 639 (1790); *Bechst. Nat. Deutschl.* iii. p. 508 (1793); *Wolf & Meyer, Nat. Vög. Deutschl.* ii. p. 37, pls. (1805); *Penn. Brit. Zool.* i. p. 359, pl. 57 (1812); *Temm. Pig. et Gall.* iii. pp. 185, 707 (1815); *Roux, Orn. Prov.* ii. p. 31, pl. 255 (1830); *Naum. Nat. Vög. Deutschl.* vi. p. 401, pls. 160, 161 (1833); *Schinz, Nat. Abbild. Vög.* p. 279, pl. 105 (1833); *Thomps. Nat. Hist. Irel.* ii. p. 45 (1850); *Schinz, Nat. Vög.* p. 159, pl. 78 (1853); *Companyo, Hist. Nat. Pyrén.* iii. p. 198 (1863); *Altum, J. f. O.* 1891, p. 103.

* This is the specimen mentioned in the 'Field' of the 22nd December, 1888, as a probable hybrid between the Blackcock (recently introduced into Newfoundland) and the Willow-Grouse.

Le Lagopède, *Buff. Nat. Hist. Ois.* ii. p. 301 (1772).
Tetrao mutus, *Montin, Phys. Sälsk. Hand.* i. p. 155 (1776–86); *Seebohm, Hist. Brit. B.* ii. p. 424, pl. 20 (1884).
Ptarmigan, *Lath. Gen. Syn.* ii. pt. ii. p. 741 (1783); *Selb. Brit. Orn.* i. pt. ii. pl. 59. fig. 2, & pl. 60 (1833); *Yarrell, Brit. B.* ii. p. 322 (1843).
Tetrao rupestris, *Bechst. Gem. Naturg. Deutsch.* iii. p. 1358 (1807); *Jenyns, Man. Brit. Vert. An.* p. 171 (1835).
Lagopus mutus, *Leach, Syst. Cat.* p. 27 (1816); *Steph. in Shaw's Gen. Zool.* xi. p. 287, pl. 19 (1819); *Jard. Nat. Lib., Orn.* iv. p. 150, pls. xix., xx. (1834); *Gould, B. Eur.* iv. pl. 253 (1837); *Gray, List Gallinæ Brit. Mus.* p. 48 (1844) [part.]; *Gould, B. Gt. Brit.* iv. pls. 8–10 (1864); *Elliot, Mon. Tetr.* pls. xxi., xxii. (1865); *Degl. & Gerbe, Orn. Europ.* ii. p. 40 (1867); *Gray, List Gallinæ Brit. Mus.* p. 91 (1867); *id. Hand-l. B.* ii. p. 278 (1870); *Fritsch, Nat. Vög. Europ.* p. 279 (1870), pl. 30. figs. 3, 4, 6 (1871); ? *Tacz. J. f. O.* 1873, p. 98 [E. Siberia]; *Dress. B. Eur.* v. p. 157, pls. 477, 478, 484 [part.] (1874); ? *Tacz. Bull. Soc. Zool. Fr.* i. p. 242 (1876) [Lake Baikal]; *Gigl. Av. Ital.* pl. 247 (1879); *Booth, Rough Notes*, ii. pls. & text (1881–7); *Turner, P. U.S. Nat. Mus.* v. pp. 227, 232 (1882); *Saund. ed. Yarr. Brit. B.* iii. p. 83 (1884); *id. Ibis*, 1884, p. 387 [Pyrenees]; *Collett, N. Mag. Naturv.* xxiii. p. 163 (1877); *Gigl. Av. Ital.* p. 345 (1886); *Salvad. Ucc. Ital.* p. 195 (1887); *Service, Zoologist*, 1887, p. 81 [Kirkcudbright and Dumfriesshires formerly]; *Macpherson, Zoologist*, 1887, p. 194; *Lilford, Col. Fig. Brit. B.* pt. ix. 3 pls. (1888); *Clarke, Ibis*, 1889, p. 551 [E. Pyrenees]; *Saund. Ill. Man. Brit. B.* p. 483 (1889); *Gigl. Av. Ital.* i. p. 536 (1889). ii. p. 653 (1890), iii. p. 513 (1891); *Saund. Ibis*, 1891, p. 186 [Switzerland]; *Millais, Game B.* pp. 63–72 pls. & woodcuts (1892).
Tetrao alpinus, *Nilss. Orn. Sv.* i. p. 311 (1817).
Lagopus vulgaris, *Vieill. N. Dict. d'Hist. Nat.* xvii. p. 199 (1817); *Flem. Hist. Brit. An.* p. 43 (1842); *R. Gray, B. West Scot.* p. 236, pl. (1871); *Olphe-Gall. Faun. Orn. Eur. Occ.* fasc. 37–40, p. 51 (1886).
Lagopus mutans, *Forst. Syn. Cat. Brit. B.* p. 19 (1817).
Ptarmigan Grous, *Lath. Gen. Hist. B.* viii. p. 239 (1823).
Tetrao montanus, *Brehm, Lehrb. Eur. Vög.* p. 448 (1823).
Lagopus montanus, *Brehm, Handb. Vög. Deutschl.* p. 516 (1831).
Lagopus alpina, *Nilss. Ill. Skand. Faun.* i. pp. 8, 9, 10 (1832); *Sunder. Svensk. Fogl.* pl. xxxv. figs. 1–4 (1856).
Lagopus rupestris, *Gould, B. Eur.* iv. pl. 254 (1837); *Collett, Vid. Selsk. Forh. Christ.* 1868, p. 159.
Lagopus cinereus, *Macgill. Hist. Brit. B.* i. p. 187 (1837).
Lagopus alpinus, *Brandt, in Hofmann, N. Ural Exp.* ii. App. p. 68 (1856); *Nilss. Skand. Faun. Fog.* ii. p. 103 (1858); *Jaub. & Lapomm. Rich. Orn.* p. 431 (1859); *Collett, Forh. Vid. Selsk. Christ.* 1872, p. 251 [N. Norway]; *Palm. J. f. O.* 1876, p. 42 [Finland]; *Finsch, Ibis*, 1877, p. 49 [Omsk]; *Collin. Skand. Fugle*, p. 419 Suppl. pl. 5 (1877); *Seebohm, Ibis*, 1882, p. 379 [Kola Pen.]; *Bogd. Consp.-Av. Ross.* fasc. i. p. 33 (1884); *Stejn. Auk*, i. p. 225 (1884); *Csató, Zeit. ges. Orn.* ii. p. 482 (1885) [Hunyad]; *Pleske, Uebers. Vög. Kola*, p. 298 (1886); *Olphe-Gall. Faun. Orn. Eur. Occ.* fasc. 37–40, p. 53 (1886); *Cab. J. f. O.* 1886, p. 348, 1887, p. 568, 1888, p. 527 [Alps, Germany].
Lagopus alpinus minor, *Brehm, J. f. O.* 1860, p. 393.
Lagopus albus, *More (nec Gm.), Ibis*, 1865, p. 427 [Gt. Britain].

Fjäll Ripa, *Lloyd, Game B. Swed. & Norw.* p. 138, pl. (1867).
Tetrao albus, *Paton, Scot. Nat.* i. p. 112 (1871–2) [Perthshire].
Lagopus mutus, var. mutus, *Baird, Brew., & Ridgw. B. N. Am.* iii. p. 456 (1874).
Lagopus alpinus, var. scandinavica, *Sundev. Œfv. Vet.-Ak. Förh.* 1874, p. 19 [Scandinavia).
Lagopus alpinus, var. meridionalis, *Sudev. Œfv. Vet.-Ak. Förh.* 1874, p. 19 [Alps and Pyrenees].
Lagopus muta, *Stejn. Zeit. ges. Orn.* i. p. 87 (1884).
Lagopus muta vulgaris, *Stejn. Zeit. ges. Orn.* i. p. 88 (1884).

Adult male [*winter plumage*]. A black patch extending from the lores through the eye; the tail-feathers, except the middle pair black, often partly white towards the base and narrowly tipped with white; rest of the plumage pure white.

Adult female [*winter plumage*]. Similar, but with the black patch in front of the eye absent or rudimentary.

Adult male [*summer plumage*]. General colour of the head, upper parts, sides, and flanks dark brown or blackish brown, more or less finely mottled and barred with grey and rusty on the back, rump, and upper tail-coverts; the chest and upper breast blackish brown, sometimes slightly mottled; the quills, outer wing-coverts, centre tail-feathers, and rest of underparts white.

Adult female [*summer plumage*]. General colour above black, mixed with rufous buff, most of the feathers being edged with white or pale buff; underparts rufous buff, barred with black; centre tail-feathers barred with black and buff; rest of the tail-feathers black tipped with white, as in the male, and often with a large portion of the basal part white; quills and outer wing-coverts white.

Adult male [*autumn plumage*]. General colour of the upper parts, central pair of tail-feathers, chest, upper breast, and sides grey, finely mottled with black, and sometimes with buff; quills, outer wing-coverts, and the rest of underparts white.

Adult female [*autumn plumage*]. Similar to the male, but usually to be distinguished by retaining a few of the reddish-buff and black feathers of the faded summer plumage.

Adult male. Total length 14·5 inches, wing 7·6, tail 4·6, tarsus 1·3.

Adult female. Total length 14 inches, wing 7·4, tail 4·1, tarsus 1·3.

Immature birds differ only from the adult in having the primaries mixed with blackish brown along the shaft.

Young birds have the general colour of the head, upper parts, chest, and sides black, barred and mottled with rufous buff, most of the feathers with a white spot at the extremity; the primaries are brownish black, mottled with buff on the outer web; the belly and rest of underparts are whitish, indistinctly barred with dusky; tail-feathers black, with irregular bars and markings of buff.

The above plumages are, we consider, fairly typical of the seasons in which they occur, but the individual variation is so great

that it is perfectly impossible to give more than a very general description. It must also be borne in mind that the plumage of every individual, which is constantly changing every month either by moulting or by the changing of pattern in the same feather, or by wearing off of the tips, is greatly influenced by the climate of the country it inhabits: for instance, specimens from Scotland are only found in complete white plumage in exceptionally severe winters, and usually retain a good many of the summer and autumn feathers on the top of the head and back; while specimens from the northern parts of Norway and Sweden never complete either their summer or autumn plumage, but retain a large amount of white throughout the year. Anyone who has been able to examine large series of this and other species of *Lagopus* from different parts of their range, and has seen all the possible variation in colour to which each species is subject, will be very cautious before adding another name to the already over-burdened synonymy.

Hab. Europe [and possibly some of the ranges in Central Asia, but it is almost impossible to tell whether the references should be referred to this species or *L. rupestris*]; ranging westwards to Scotland, southwards to the Pyrenees and Alps, and eastwards to the Ural Mountains.

For an excellent account of the various changes of plumage during every month of the year, we refer to J. G. Millais's 'Game Birds and Shooting-Sketches,' pp. 69, 70.

a–c. ♂ ad. ♀ imm. sk. et ♂ ad. st.	Scotland, Sept. and winter.	Gould Coll.
d. ♀ ad. sk.	Scotland.	Montagu Coll.
e, f. ♀ imm. st. et sk.	Inverness.	Purchased.
g. ♂ imm. sk.	Grampian Mts., Oct. (*Swan*).	Gould Coll.
h, i. ♂ ♀ ad. st.	Perthshire.	Duke of Athole [P.].
k. ♂ imm. st.	Perthshire, autumn.	E. Booth, Esq. [P.].
l, m. ♂ ad. et ♀ imm. sk.	Tyndrum, Perthshire, Dec.	Marquis of Breadalbane [P.].
o–v. ♂ ♀ ad. et imm. sk.	Argyllshire, Dec.	F. Menteith Ogilvie, Esq. [P.].
w. ♀ ad. sk.	Europe, summer to autumn.	Purchased.
x–a'. ♂ ad. sk.	Switzerland, spring, winter.	Dr. C. Moesch [C.].
b'. ♀ ad. sk.	Oberhasle, Berne, summer.	Gould Coll.
c'. ♂ ad. sk.	Norway, Feb.	Gould Coll.
d'. ♂ ad. sk.	Norway, March.	India Museum [P.].
e'. ♀ ad. sk.	Norway, Sept.	E. Valpy, Esq. [P.].
f'. ♂ ad. sk.	Tönfœt, Norway, Sept.	Prof. R. Collett [P.].
g'. ♂ ad. sk.	Dovrefjeld Mts., Norway, spring.	Gould Coll.
h'. ♂ ad. sk.	Sneehättan, Norway, July.	Gould Coll.
i'. ♀ imm. sk.	Kvikne, Norway, Oct.	Prof. R. Collett [P.].
k'. ♂ ad. sk.	Röros, Norway, Nov.	Prof. R. Collett [P.].
l'. ♂ imm. sk.	Ryfylke, Norway, Sept.	Prof. R. Collett [P.].
m', n'. ♂ ♀ ad. sk.	Hammerfest, Norway, June (*E. Evans*).	Gould Coll.
o'. ♂ ad. sk.	Sweden, Aug. (*H. Wheelwright*).	Gould Coll.

p'. ♀ ad. sk.	Skibotten, March (*A. Malm*).	Gould Coll.
q'–v'. ♂ ♀ ad., imm., juv., et pull. sk. et st.	Quickjock, Sweden, May, Aug.	Gould Coll.
w'. ♀ imm. sk.	Russia, winter.	Gould Coll.

x'. Sternum and shoulder-girdle.
y'–b². Skulls and sterna.

Hybrid between Lagopus mutus *and* L. scoticus. *See* p. 39.

Hybrid between Lagopus mutus *and* L. lagopus. *See* p. 43.

4. Lagopus rupestris.

Tetrao lagopus, *Fabr.* (*nec Linn.*) *Faun. Grœnl.* p. 114 (1780); *Sabine, Tr. Linn. Soc.* xii. p. 530 (1818) [Hare Island]; *id. Suppl. Parry 1st Voy.* p. 197 (1824) [S. of Barrow Straits]; *Rich. App. Parry 2nd Voy.* p. 350 (1824).

Rock Grouse, *Penn. Arct. Zool.* ii. p. 312 (1785); *Lath. Gen. Syn. Suppl.* i. p. 217 (1787); *id. Gen. Hist. B.* viii. p. 241 (1823).

Tetrao rupestris, *Gm. S. N.* i. pt. ii. p. 751 (1788); *Lath. Ind. Orn.* ii. p. 640 (1790); *Sabine, Suppl. Parry 1st Voy.* p. 195 (1824); *Rich. App. Parry 2nd Voy.* p. 348 (1824); *Aud. Orn. Biogr.* iv. p. 483, pl. 368 (1838).

Lagopus rupestris, *Leach, Zool. Misc.* ii. p. 290 (1817); *Aud. B. Amer.* v. p. 122, pl. 301 (1842); *Baird, B. N. Amer.* p. 653 (1858); *Elliot, Mon. Tetr.* pl. xxiii. (1865); *Gray, List of B.* pt. v. *Gall.* p. 92 (1867); *Dall & Bann. Tr. Chic. Ac.* i. p. 289 (1869); *Gray, Hand-l. B.* ii. p. 278 (1870) [N.W. Alaska]; *Harting, P. Z. S.* 1871, p. 117; *Newt. Pr. Ac. Philad.* 1871, p. 96; *Dress. B. Eur.* v. p. 175, pls. 477 [part.], 480, 481 (1874); *Feilden, Ibis*, 1877, p. 405 [N. Greenland]; *id. P. Z. S.* 1877, pp. 29–31 [Dobbin Bay]; *Nels. Bull. Nutt. Orn. C.* iii. p. 38 (1878) [Aleutian Is.]; *Seebohm, Ibis*, 1879, p. 148 [Yenisei, 71½° N. lat.]; *Maym. B. E. N. Amer.* p. 349 (1881); *Nels. Cruise 'Corwin,'* p. 81, no. 79 (1883); *Seebohm, Ibis*, 1884, p. 179 [Kurile Is.]; *Stejn. Zeit. ges. Orn.* i. p. 90 (1884); *Coues, Key*, p. 587 (1884); *Murd. Auk*, ii. p. 63 (1885) [Pt. Barrow]; *Brewst. Auk*, ii. p. 221 (1885) [Anticosti]; *Clarke & Backhouse, Ibis*, 1885, p. 368, pl. ix. [Iceland]; *Slater & Carter, Ibis*, 1886, p. 49 [Iceland]; *A. O. U. Check-l.* p. 173 (1886); *Turner, Contr. N. H. Alaska*, p. 154 (1886); *id. Pr. U.S. Nat. Mus.* viii. p. 245 (1886) [Labrador]; *Olphe-Gall. Faun. Orn. Eur. Occ.* fasc. 37–40, p. 63 (1886); *Nels. Rep. N. H. Alaska*, p. 136 (1887) [Alaska]; *Ridgw. Man.* p. 200 (1887).

Tetrao islandorum, *Faber, Prodr. Isl. Orn.* p. 6 (1822).

Tetrao islandicus, *Brehm, Lehrb. Eur. Vög.* p. 440 (1823).

Tetrao reinhardi, *Brehm, Lehrb. Eur. Vög.* p. 440 (1823).

Tetrao reinhardti, *Brehm, Isis*, 1826, p. 930; *Walker, Ibis*, 1860, p. 166 [Godhavn, Greenland].

Tetrao (Lagopus) rupestris, *Sw. & Rich. Faun. Bor.-Amer.* ii. p. 354, pl. lxiv. (1831); *Ross, Arct. Exp.* p 29 (1835).

Tetrao (Lagopus) mutus, *Sw. & Rich. Faun. Bor.-Amer.* ii. p. 350 (1831); *Ross, Arct. Exp.* p. 28 (1835).

Tetrao mutus, *Aud. Orn. Biogr.* v. p. 196, pl. 318 (1839); *Seebohm, B. Jap. Emp.* p. 372 (1890).

Lagopus americanus, *Aud. Syn.* p. 207 (1839); *id. B. Amer.* v. p. 119, pl. 300 (1842); *Baird, B. N. Am.* p. 637 (1860) [Greenland].
Tetrao lagopus islandicus, *Schl. Rev. Crit.* p. lxxvi (1844).
Lagopus islandorum, *Gray, List of B.* pt. iii. *Gall.* p. 47 (1844); *Bonap.C. R.* xlii. p. 880 (1856); *Stejn. Zeit. ges. Orn.* i. p. 90 (1884).
Attagen rupestris, *Reich. Av. Syst. Nat.* p. xxix (1851).
Lagopus alpinus, *Middend. Sibir. Reis.* ii. pt. ii. p. 191 (1851) [Taimur R.]; *Radde, Ost-Sib.* ii. p. 295 (1863); *Swinh. P. Z. S.* 1863, p. 338 [Amoorland].
Lagopus reinhardti, *Brehm, Naumn.* 1855, p. 287 [Greenland]; *Reinh. Ibis*, 1861, p. 9 [Greenland]; *Ridgw. Man.* p. 200 (1887).
Lagopus grœnlandicus, *Brehm, Nauman.* 1855, p. 287; *id. Vogelf.* p. 264, footnote (1855); *Olphe-Gall. Faun. Orn. Eur. Occ.* fasc. 37–40, p. 65 (1886).
Lagopus rupestris, β. islandorum, *Blas. List Eur. B.* p. 16 (1862).
Lagopus rupestris, γ. reinhardtii, *Blas. List Eur. B.* p. 16 (1862).
Lagopus mutus, *Blakist. Ibis*, 1862, p. 329 [Yezo?]; *Swinh. P. Z. S.* 1863, p. 338 [Japan]; *Seebohm, Ibis*, 1884, p. 35 [Hondo]; *Blakist. & Pryer, Ibis*, 1878, p. 226 [Japan].
Lagopus mutus, β. reinhardti, *Dubus, Consp. Av. Eur.* p. 21 (1871).
Lagopus albus, *Dall, P. Cal. Acad. Sci.* v. pt. i. p. 28 (1873) [Choumagin Is. & Unalashka], & v. pt. iii. p. 274 (1875) [Attu & Kyska Is.].
Lagopus rupestris, var. occidentalis, *Sundev. Œfv. Sv. Vet.-Ak. Förh.* 1874, p. 20 [Greenland].
Lagopus mutus, var. rupestris, *Baird, Brew., & Ridgw. B. N. Am.* iii. p. 462 (1874).
Lagopus mutus reinhardti, *Turner, P. U.S. Nat. Mus.* v. p. 229 (1882).
Lagopus mutus rupestris, *Turner, P. U.S. Nat. Mus.* v. p. 228 (1882).
Lagopus mutus atkhensis, *Turner, P. U.S. Nat. Mus.* v. pp. 230, 233 (1882); *Reich. & Schal. J. f. O.* 1883, p. 409.
Lagopus rupestris occidentalis, *Nels. Cruise 'Corwin,'* p. 83 (1883).
Lagopus rupestris reinhardtii, *Stejn. Zeit. ges. Orn.* i. p. 91 (1884); *A. O. U. Check-l.* p. 174 (1886); *Chamb. Auk*, vi. p. 217 (1889) [S. Greenland].
Lagopus rupestris nelsoni, *Stejn. Zeit. ges. Orn.* i. p. 91 (1884); *id. Auk*, i. p. 226 (1884) [Unalashka Is.]; *A. O. U. Check-l.* p. 174 (1886); *Ridgw. Man.* p. 201 (1887); *Nels. Rep. Nat. Hist. Alaska*, pp. 131, 133, pl. x. (1887).
Lagopus rupestris atkhensis, *Stejn. Zeit. ges. Orn.* i. p. 92 (1884); *A. O. U. Check-l.* p. 174 (1886); *Turner, Contr. Nat. Hist. Alaska*, p. 155, pls. iii. & iv. [♂ ♀ summer] (1886); *Nels. Rep. N. H. Alaska*, pp. 137, 139 (1887); *Ridgw. Man.* p. 201 (1887).
Lagopus rupestris, subsp. insularis, *Boyd. Consp. Av. Ross.* fasc. i. p. 34 (1884) [Behring Is.].
Lagopus ridgwayi, *Stejn. Zeit. ges. Orn.* 1884, p. 89, pl. v.; *id. Am. Nat.* 1884, p. 774; *id. P. Biol. Soc. Wash.* ii. p. 98 (1884) [Commander Is.].
Lagopus welchii, *Brewst. Auk*, ii. p. 193 (1885) [Newfoundland]; *A. O. U. Check-l.* p. 174 (1886); *Ridgw. Man.* p. 201 (1887).
Lagopus islandicus, *Olphe-Gall. Faun. Orn. Eur. Occ.* fasc. 37–40, p. 58 (1886).

This species is merely a more Northern rufous form of *L. mutus*

and goes through similar changes of plumage; in summer the males are easily distinguishable, but in winter it is impossible to tell one from the other. This form has been divided into a number of species and subspecies in different parts of its range, the birds from Iceland being known as *L. islandorum*, those from Greenland and the western side of Davis Strait and Baffin's Bay as *L. reinhardti*; those from Newfoundland as *L. welchi*; those from Arctic America as *L. rupestris*; those from Unalashka Is. as *L. nelsoni*; while from the outer Aleutian Islands the bird is known as *L. atkhensis*, and from Behring Island as *L. insularis* or *L. ridgwayi*. At present the only ones which have escaped being given a name are those from Japan and the North of Asia. Of the greater number of these supposed different species we have seen or possess examples, and of the rest there are excellent figures and descriptions. After going over all the facts very carefully and allowing for very slight individual differences and climatic variations, we cannot see the slightest object to be gained in cataloguing under endless names what are clearly only forms of one species, especially as *L. rupestris*, taken as a whole, appears to us barely specifically distinct from *L. mutus*. We have not seen examples from Newfoundland, but from all accounts they have the upper plumage grey, almost identical with that of *L. mutus* in autumn. It is also on record that grey forms which have been identified as *L. mutus* have been obtained in some of the islands to the north of Arctic America.

The *adult male* of *L. rupestris* appears to have the chest always barred with black in the summer plumage, and never uniform blackish brown as in *L. mutus*. This is the only striking difference beyond the general tone of the plumage.

Adult male. Total length 14·6 inches, wing 7·7, tail 4·5, tarsus 1·2.

Adult female. Total length 14 inches, wing 7·5, tail 4·1, tarsus 1·15.

Hab. Iceland, Greenland, Newfoundland, and Arctic America, Aleutian Is., Behring Is., Japan, and Northern Asia, and probably as far west as the Ural Mountains.

a, b. ♂ imm. st. et sk.	Iceland, autumn.	Purchased.
c, d. ♂ ad. et imm. sk.	Iceland, winter.	Gould Coll.
e. Pull. sk.	Iceland, July.	Gould Coll.
f, g. ♂ ♀ imm. sk.	Iceland, Sept.	J. Backhouse, Esq., Jr. [P.].
h. ♀ imm. sk.	Iceland, winter.	H. E. Dresser, Esq. [E.].
i–l. ♂ ♀ ad. et imm. sk.	Greenland, autumn.	Capt. Holböll [C.].
m, n. ♂ ♀ ad. sk.	Greenland, autumn.	Gould Coll.
o–u. ♂ ♀ ad. et imm. sk.	Lichtenfels, S. Greenland, Sept., Nov., Jan.	Dr. R. B. Sharpe [P.].
w. ♀ ad. sk.	Musk-ox Bay, Greenland, June.	Lords of the Treasury [P.].
x. ♂ ad. sk.	N. Greenland, lat. 82° 31′, June (*H. W. Feilden*).	'Alert' Arctic Exped.

y, *z*. ♂ ♀ ad. sk.	Hare Ravine, N. Greenland, lat. 82° 32′, May, June, (*H. W. Feilden*).	'Alert' Arctic Exped.
a′. Pull. sk.	Ritenbenk, N. Greenland, July (*H. W. F.*).	'Alert' Arctic Exped.
b′. ♂ ad. sk.	Discovery Bay, winter.	Lords of the Treasury [P.].
c′. ♂ ad. sk.	Northumberland Sound, Oct.	Gould Coll.
d′. ♂ ad. sk.	Port Bowen, Cockburn Is., winter.	Dr. Neill [P.].
e′. ♂ ad. st.	Arctic America, winter.	Admiral Sir G. Back [P.].
f′–h′. ♂ ad. et ♀ imm. sk. et st.	Arctic America, summer and winter.	Dr. J. Rae [P.].
i′. ♀ ad. sk.	Arctic America, summer.	Gould Coll.
j′, *k′*. ♂ ♀ ad. sk.	Hudson's Bay, winter.	Gould Coll.
l′. ♀ ad. sk.	Canada, Jan. (*W.H.Collins*).	Salvin-Godman Coll.
m′. ♂ imm. sk.	Fort Resolution, Jan. (*J. Lockhart*).	Salvin-Godman Coll.
n′–p′. ♂ ♀ ad. sk.	N.W. America, winter and summer.	Capt. Collinson [P.].
q′. ♀ ad. sk.	Galsova R., Alaska, Feb. (*E. W. Nelson*).	Salvin-Godman Coll.
r′, *s′*. ♂ ad. sk.	Kegiktowik, Alaska, Mar., Oct. (*E. W. Nelson*).	Salvin-Godman Coll.
t′. ♀ ad. sk.	Nulato, Youkon R., Alaska, Jan. (*W. H. Dall*).	Salvin-Godman Coll.
u′, *v′*. ♂ imm. sk.	Kotzebue Sound.	Capt. Kellett & Lieut. Wood [P.].
w′. ♂ imm. sk.	[Falkland Is.]	G. Bennett [P.].
x′. Sternum and shoulder-girdle.		Dr. J. Rae [P.].

5. Lagopus hyperboreus.

Tetrao lagopus, *Ross*, *App. Parry's Narrative*, p. 193 (1828).
Lagopus alpina, var. hyperborea, *Sundev. in Gaim. Voy. Scandin.*, *Atl.* livr. xxxviii. pl. (1838).
Lagopus hemileucurus, *Gould*, *P. Z. S.* 1858, p. 354 [Spitzbergen]; *Evans & Sturge*, *Ibis*, 1859, p. 170; *Newt. P. Z. S.* 1864, p. 496; *id. Ibis*, 1865, p. 502; *Gray*, *List Gallinæ Brit. Mus.* p. 93 (1867); *id. Hand-l. B.* ii. p. 278 (1870); *Dress. B. Eur.* v. p. 179, pl. 482 (1871); *Olphe-Gall. Faun. Orn. Eur. Occ.* fasc. 37–40, p. 61 (1886).
Tetrao alpina, *Torell*, *Bidr. Spitsberg.* p. 51 (1859).
Lagopus hyperborea, *Malmgren*, *Œfv. Kongl. Vet.-Ak. Förh.* 1863, p. 100; *Steju. Zeit. ges. Orn.* 1884, p. 89.
Lagopus hyperboreus, *Elliot*, *Mon. Tetr.* pl. xxiv. (1865).
Lagopus rupestris ?, *Newt. Ibis*, 1865, p. 504, 1871, p. 249.
Lagopus rupestris, var. hyperborea, *Sundev. Œfv. Sv. Ak. Förh.* 1874, pp. 18, 20 [Spitzbergen].

This species differs from *L. mutus* and *L. rupestris* in the amount of white on the basal part of the tail, which is always considerably more than in the latter; the second pair of tail-feathers have the basal two-thirds white, and this colour gradually decreasing on the

outer pairs is confined to the basal third of the outer web in the seventh pair, but in the outermost pair, at least, the basal two-thirds of the outer web is white.

Hab. Spitzbergen.

a. ♀ ad. sk.	South shore of Ia Sound, Spitzbergen, June (*E. Evans*).	Gould Coll. (Type of *L. hemileucurus.*)
b. Imm. sk.	Spitzbergen.	Lords of the Admiralty [P.].

6. Lagopus leucurus.

Tetrao (Lagopus) leucurus, *Sw. & Rich. Faun. Bor.-Amer.* ii. p. 356 pl. 63 (1831); *Nutt. Man. Orn.* ii. App. p. 612 (1834), & i. p. 820 (1840).

Tetrao leucurus, *Aud. Orn. Biogr.* v. p. 200, pl. 418 (1839).

Lagopus leucurus, *Dougl. Tr. Linn. Soc.* xvi. p. 146 (1829)*; *Aud. B. Amer.* v. p. 125, pl. 302 (1842); *Baird, B. N. Amer.* p. 636 (1860); *Blakist. Ibis,* 1863, p. 128; *Elliot, Mon. Tetr.* pl. xxv. (1865); *Gray, List Gallinæ Brit. Mus.* p. 93 (1867); *id. Hand-l. B.* ii. p. 278 (1870); *Coop. Calif. Orn.* i. p. 542 (1870); *Baird, Brew., & Ridgw. B. N. Amer.* iii. p. 464 (1874); *Brewer, P. Bost. Soc.* xvi. p. 348 (1874); *Coues, Bull. U.S. Geol. Surv.* i. p. 263 (1876); *Scott, Nutt. Orn. C.* iv. p. 96 (1879) [Colorado]; *Drew, Bull. Nutt. Orn. C.* vi. p. 141 (1881) [Colorado]; *Hartl. J. f. O.* 1883, p. 277; *Stejn. Zeit. ges. Orn.* i. p. 92 (1884); *Coues, Key,* p. 588 (1884); *Drew, Auk,* i. p. 392 (1884), ii. p. 17 (1885) [Colorado]; *Olphe-Gall. Faun. Orn. Eur. Occ.* fasc. 37–40, p. 64 (1886); *A. O. U. Check-l.* p. 174 (1886); *Ridgw. Man.* p. 202 (1887).

Adult male. Easily distinguished from the other species of *Lagopus* at all seasons by having the outer tail-feathers pure white. The changes of plumages are similar to those of *L. mutus,* but the prevailing tints of the upper parts in *summer* are rufous buff or greyish buff, coarsely barred, marked, and spotted with black, the chest, breast, and sides white widely barred with black, often mingled with rufous buff, and the wings and the rest of the underparts white. In *autumn* the ground-colour of the upper parts is chiefly rufous buff, vermiculated and finely barred with black; middle tail-feathers partially or entirely rufous buff, freckled with black; chest, upper breast, sides, and flanks like the upper parts, but usually more or less mixed with the black-barred feathers of summer. *Winter* plumage pure white; no black patch in front of the eye. Total length 12·6 inches, wing 7·3, tail 4·3, tarsus 1·2.

Adult female. In *summer* plumage very different to the male, the upper parts being black, coarsely barred and marked with rufous; the whole of the underparts pale rufous buff, barred with black; the wings and tail are white like those of the male. The *autumn* and *winter* plumages are similar to those of the male, but in the former some of the summer plumage is retained on the breast. Total length 12 inches, wing 7·2, tail 3·7, tarsus 1·2.

Immature birds have the primaries more or less finely mottled with brown.

* No name given.

Hab. Summits of the Rocky Mountains: south to New Mexico; north to Fort Halkett, British America; westwards to Oregon, Washington Territory, and British Columbia.

a–d. ♂ ad. sk. et st. & pull. sk.	Cascade Mountains, summer and winter.	J. K. Lord, Esq. [P.].
e. Ad. sk.	Rocky Mountains, winter.	Gould Coll.
f. ♀ ad. sk.	W. side, Rocky Mountains, summer.	J. K. Lord, Esq. [P.].
g–i. ♂ ♀ ad. sk.	Colorado, summer, autumn, and winter (*C. E. Aiken*).	Salvin-Godman Coll.
k. ♂ imm. sk.	Colorado Mts., W. of Denver, autumn (*D. Thompson*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Blaine's Peak, Sept. (*C. E. Aiken*).	Salvin-Godman Coll.

2. LYRURUS.

Type.

Lyrurus, *Swains. Faun. Bor.-Amer.* ii. p. 497 (1831)..... L. tetrix.
Lyurus, *Gould, P. Z. S.* 1837, p. 132 ..... L. tetrix.

Tail composed of 18 feathers, the outer ones more or less curved outwards and longer or much longer than the centre pair.

1st primary much shorter than the 2nd and falling between the 7th and 8th; the 4th slightly the longest.

Tarsi entirely feathered, shorter than the middle toe and claw.

Toes naked, pectinated on the sides.

Axillaries long and pure white.

Range. Europe and Northern Asia.

Key to the Species.

A. Plumage mostly black.
  a. Under tail-coverts pure white ..... *tetrix* ♂, p. 53.
  b. Under tail-coverts black ..... *mlokosiewiczi* ♂, p. 58.
B. Plumage mostly rufous or buff, barred with black.
  c. Black bars and marking on breast much coarser; tail 4·5 ..... *tetrix* ♀, p. 53.
  d. Black bars and marking on breast much finer; tail 5·5 ..... *mlokosiewiczi* ♀, p. 58.

1. Lyrurus tetrix.

Black Game, *Albin, N. H. Birds*, i. pl. 22 & ii. pl. 34 (1738).
Urogallus minor, *Ray, Syn.* p. 53, A. 2; *Briss. Orn.* i. p. 186 (1760).
Tetrao tetrix, *Linn. S. N.* i. p. 274 (1766); *Gm. S. N.* i. pt. ii. p. 748 (1788); *Lath. Ind. Orn.* ii. p. 635 (1790); *Besecke, Beytr. Vög. Kurl.* p. 69 (1792); *Bechst. Nat. Deutschl.* iii. p. 483 (1793); *Pall. Zoogr. Rosso-As.* ii. p. 59, pl. 52 (1811); *Penn. Brit. Zool.* i. p. 352, pl. 46 (1812); *Nilss. Orn. Suec.* i. p. 300 (1817); *Steph. in Shaw's Gen. Zool.* p. 279, pl. 19 (1819); *Roux, Orn. Prov.* ii. p. 28, pl. 253 (1830); *Nilss. Ill. fig. Skand. Faun.* i. pls. 27, 61 (1832); *Naum. Nat. Vög. Deutschl.* vi. p. 324, pl. 157 (1833); *Gould, B.*

Eur. iv. pl. 250 (1837); *Macgill. Brit. B.* i. p. 145 (1837); *Démid. Voy. Russ. Mérid.* iii. p. 218 (1840); *Thomps. Nat. Hist. Irel.* ii. p. 34 (1850); *Middend. Sibir. Reis.* ii. pt. ii. p. 201 (1851); *Kjærboll. Danm. Fugle*, p. 237, pl. 28 c (1852); *Schinz, Nat. Vög.* p. 157, pl. 77 (1853); *Brandt in Hofmann, N.-Ural Exped.* ii. App. p. 69 (1856); *Sund. Svensk. Fogl.* pl. xxxiii. figs. 1 & 2 (1856); *Nilss. Skand. Faun., Fog.* ii. p. 61 (1858); *Schr. Reis. Amurl.* i. p. 398 (1859); *Jaub. & Lapomm. Rich. Orn.* p. 429 (1859); *Godman, Ibis*, 1861, p. 85 [Bodö]; *Boner, Forest Creat.* p. 147 (1861); *Companyo, Hist. Nat. Pyrén.* iii. p. 197 (1863); *Radde, Ost-Sib.* ii. p. 299 (1863); *Fitz. Atl. Nat., Vög.* pl. fig. 243 (1864); *More, Ibis*, 1865, p. 426 [Gt. Britain]; *David, N. Arch. Mus., Bull.* iii. p. 37 (1867) [Pekin]; *Degl. & Gerbe, Orn. Europ.* ii. p. 47 (1867); *Gray, List of B.* pt. v. *Gall.* p. 85 (1867); *Lloyd, Game-B. Swed. & Norw.* p. 72, pls. (1867); *Dybow. J. f. O.* 1868, p. 336 [Daouria]; *Collett, Vid. Selsk. Forh. Christ.* 1868, p. 157; *Gray, Hand-l. B.* ii. p. 276 (1870); *Favre, Bull. Soc. Neuch.* viii. p. 428 (1870) [Ekaterinbourg]; *Elwes & Buckl. Ibis*, 1870, p. 328 [Bulgaria]; *Fritsch, Nat. Vög. Europ.* p. 290 (1870), pl. 31. figs. 3 & 4 (1871); *Gould, B. Gr. Brit.* iv. pl. 6 (1871); *R. Gray, B. West Scotl.* p. 230 (1871); *Stejn. J. f. O.* 1871, p. 124 [S. Tyrol]; *Swinh. P. Z. S.* 1871, p. 400 [N. Chelee]; *Paton, Scot. Nat.* i. p. 113 (1871–2) [Perthshire]; *Collett, Forh. Vid. Selsk. Christ.* 1872, p. 234 [N. Norway]; *Alst. & Brown, Ibis*, 1873, p. 66 [Archangel]; *Severtz. Turkest. Jevotn.* p. 68 (1873); *Dress. B. Eur.* v. p. 205, pl. 487 (1873); *Tacz. J. f. O.* 1873, p. 98; *Danf. & Brown, Ibis*, 1875, p. 417 [Transylvania]; *Severtz. J. f. O.* 1875, p. 181 [Central Asia]; *Seebohm & Brown, Ibis*, 1876, p. 22 [Lower Petchora]; *Palm. J. f. O.* 1876, p. 41 [Finland]; *Radakoff, Hand-Atl.* Map 16 (1876) [whole distribution]; *Dress. Ibis*, 1876, p. 322; *Schal. J. f. O.* 1876, p. 25 [Mark Brandenburg]; *Finsch, Ibis*, 1877, pp. 49, 65 [Obi R.]; *Tacz. Bull. Soc. Zool. Fr.* ii. p. 153 (1877) [Poland]; *Collin, Skand. Fugle*, p. 410 (1877); *Wüstn. J. f. O.* 1877, p. 33 [Mecklenburg]; *Bau, etc. J. f. O.* 1877, p. 325, 1878, p. 418 [Germany]; *Liebe, J. f. O.* 1878, p. 76 [E. Hungary]; *Seebohm, Ibis*, 1879, p. 147 [Yenisei]; *Brandt, J. f. O.* 1880, p. 241 [St. Petersburg]; *Finsch, Verh. Ges. Wien*, xxix. p. 232 (1880); *Cab. J. f. O.* 1880, pp. 71, 393 [Germany]; *Schal. J. f. O.* 1881, p. 302 [Mark Brandenburg]; *Büchn. u. Pleske, Beitr. Orn. St. Pet.* p. 91 (1881); *Meyer, Vogel-Skel.* pl. xvi. (1881), pl. cii. (1886); *Booth, Rough Notes*, ii. pl. & text (1881–7); *Seebohm, Ibis*, 1882, p. 220 [Astrakhan], p. 380 [Archangel]; *Cab. J. f. O.* 1882, p. 90, 1883, p. 61 [Germany]; *Boyd. Consp. Av. Ross.* fasc. i. p. 26 (1884); *Cab. J. f. O.* 1884, p. 39 [Germany]; *Seebohm, Hist. Brit. B.* ii. p. 435, pl. 20 (1884); *Saund. ed. Yarr. Brit. B.* iii. p. 60 (1884); *Cab. J. f. O.* 1885, p. 315 [Germany]; *Schal. Zeit. ges. Orn.* ii. p. 13 (1885); *Wiebke, J. f. O.* 1885, p. 392; *Meier, J. f. O.* 1885, p. 95 [E. Prussia]; *Harting, Zool.* 1885, p. 41, pl. i. [♀ in ♂ plumage]; *Csató, Zeit. ges. Orn.* ii. p. 482 (1885) [Hunyard]; *Pleske, Uebers. Vög. Kola*, p. 311 (1886); *Cab. J. f. O.* 1886, p. 344, 1887, p. 568 [Germany]; *Lorenz, Orn. Kaukas.* p. 62 (1887); *Salvad. Ucc. Ital.* p. 197 (1887); *Meyer, Unser Auer-, Rackel- und Birkwild, etc.* pp. 16–35, pls. 4–7 (1887); *Lilford, Col. Fig. Brit. B.* pt. vii. (1888); *Knauthe, J. f. O.* 1888, p. 36; *Reiser, J. f. O.* 1888, p. 51; *Severtz. Zeit. ges. Orn.* iv. p. 17 (1888) [Turkestan]; *Meyer & Helm, Zeit. ges. Orn.* iv. p. 370 (1888); *Pleske, Mém. Ac. St. Pét.* (7) xxxvi. no. 3, p. 47 (1888); '*The Field*,' 1888, Dec. 22 [Newfoundland, introd.]; *Lorenz, J. f. O.* 1889, p. 153 [N. Caucasus]; *Saund. Ill. Man. Brit.*

B. p. 479 (1889); *Sclat. Ibis*, 1889, p. 261 [Newfoundland, introd.]; *Schal. J. f. O.* 1890, p. 16; *Saund. Ibis*, 1891, p. 186 [Switzerland]; *Altum, J. f. O.* 1891, p. 101, woodcut; *Hartert, Ibis*, 1892, p. 511 [E. Prussia]; *Millais, Game B.* pp. 21–42, pls. & woodcuts (1892).

Coq de Bruyère à queue fourchue, *D'Aubent. Pl. Enl.* pls. [nos. 172, 173]; *Buff. Hist. Nat. Ois.* ii. p. 255 (1772).

Nemesian Grous, *Lath. Gen. Syn.* ii. pt. ii. p. 735 (1783); *id. Gen. Hist. B.* viii. p. 244 (1823).

? Tetrao nemesianus, *Gm. S. N.* i. pt. ii. p. 748 (1788); *Lath. Ind. Orn.* ii. p. 637 (1790).

Black Grouse, *Lath. Gen. Syn.* ii. pt. ii. p. 733 (1783), *Suppl.* i. p. 213 (1787); *Penn. Arct. Zool.* ii. p. 314 (1785); *Lath. Gen. Hist. B.* viii. p. 228 (1823); *Selb. Brit. Orn.* i. pt. ii. pls. 58, 59 (1833); *Yarrell, Brit. B.* ii. p. 304, fig. (1843).

Urogallus tetrix, *Kaup, Nat. Syst.* p. 180 (1829).

Lyrurus tetrix, *Swains. & Rich. Faun. Bor.-Amer.* ii. p. 497 (1831); *Jard. Nat. Lib., Orn.* iv. p. 153, pls. xxi., xxii. (1834); *Gray, List of B.* pt. iii. *Gall.* p. 47 (1844); *Elliot, P. Ac. Philad.* 1864, p. 23 *id. Mon. Tetr.* pl. xii. (1865); *Tacz. Bull. Soc. Zool. Fr.* i. p. 242 (1876); *Stejn. Am. Nat.* 1884, p. 774; *Gigl. Av. Ital.* p. 344 (1886); *Olphe-Gall. Faun. Orn. Eur. Occ.* fasc. 37–40, p. 30 (1886); *Gigl. Av. Ital.* i. p. 533 (1889), ii. p. 654 (1890), iii. p. 513 (1891).

Tetrao juniperorum, *Brehm, Handb. Vögel Deutschl.* p. 509 (1831); *id. Vogelf.* p. 261 (1855).

Tetrao ericæus, *Brehm, Handb. Vögel Deutschl.* p. 511 (1831); *id. Vogelf.* p. 261 (1855).

Lyurus derbianus, *Gould, P. Z. S.* 1837, p. 132.

Tetrao peregrinus, *Brehm, Nauman.* 1855, p. 287.

Tetrao tetrix, subsp. viridanus, *Lorenz, J. f. O.* 1891, p. 366 *.

Adult male. General colour black; the feathers of the head, neck, lower back, and rump widely, and of the mantle narrowly margined with purplish steel-blue; the outer webs of the outer primaries pale brown, more or less mottled with white, the basal part of the four inmost primaries and of the secondaries pure white, the inner secondaries also narrowly margined at the extremity with the same colour; except in very old examples there are usually traces of rufous mottlings on the outer secondaries: axillaries, under wing-coverts, and under tail-coverts pure white, though in some specimens the latter have a black spot at the extremity; thighs and vent more or less mixed with white; naked skin and wattle above the eye scarlet; bill black; feet horny brown. Total length 23·5 inches, wing 10·3, tail 8·8, tarsus 1·9.

In summer, while the males are moulting and present a somewhat miserable appearance without their tails, the black feathers on the back and sides of the head and nape are replaced by brownish-buff and black feathers barred like those of the female.

Immature males have much less blue gloss on the plumage; many of the feathers of the head and neck are narrowly fringed with rufous, and the wing-coverts, scapulars, and secondaries are more or less thickly vermiculated with the same colour; the primaries are more or less mottled at the tip and the outer primary is more

* I have examined typical examples of this supposed subspecies.

pointed than in the adult; the tail is smaller and the outer feathers much less curled*.

The young male resembles at first the young female, but soon the black feathers begin to appear on the sides and middle of the breast and belly, shoulders, back, and in the tail.

Adult female. Top of the head and neck equally barred with black and rufous buff; back and rump black, barred with rufous; wing-coverts, scapulars, and secondaries very similar, but the bars are much broken and take more the form of mottlings; the longer wing-coverts and secondaries are irregularly tipped with white; the basal part of the inner primaries and secondaries white, rest of primaries dark brown, mottled on the outer web with buff; sides of the head, chin, and throat rufous buff, spotted with black; breast and sides barred with black and rufous and fringed with white; belly and flanks more mottled with black; thighs and tarsi white, more or less finely mottled with dusky; under tail-coverts rufous or whitish, barred with black and widely tipped with white, *and extending beyond the middle pair of tail-feathers*; tail-feathers black, mottled and barred with rufous and narrowly tipped with white. Total length 17 inches, wing 8·9, tail 4·5, tarsus 1·6.

Immature females can be distinguished from the adults only by the more pointed first primary, mottled at the tip with rufous buff.

Young females have rufous-buff shaft-stripes at the ends of the wing-coverts; scapulars and outer secondaries and the tail reddish brown, barred with black.

Hab. Europe and Northern and Central Asia, ranging westwards to Great Britain, eastwards to the River Kolima, N.E. Siberia, southwards to the Eastern Pyrenees, North Italy, N. Caucasus, Tian Shan and Peking, and northwards to about 69° N. lat.

a, b. ♀ ad. st.†	Scotland.	Sir William H. Flower [P.].
c. ♀ ad. st.	Scotland.	Old Coll.
d. ♂ ad. sk.	Scotland.	Hume Coll.
e. ♂ ad. sk.	Scotland.	Gould Coll.
f. ♀ ad. sk.	Scotland, Oct.	W. B. Tegetmeier, Esq. [P.].
g. ♂ imm. sk.	Cromarty, Jan.	G. St. Quintin, Esq. [P.].
h. ♀ ad. sk.	Holme Rose, Nairnshire, Jan.	H. F. Rose, Esq. [P.].
i–r. ♂ ♀ ad. et pull. st.	Buchanty, Perthshire, June.	C. S. H. Drummond Moray, Esq. [P.].
s. ♂ ad. sk.	Buchanty, Perthshire, Dec.	Capt. W. A. Drummond Moray [P.].
t, u. ♂ ♀ ad. sk.	Tyndrum, Perthshire, Dec.	Marquis of Breadalbane [P.].

* Young birds from Scotland attain the black plumage much earlier than specimens from Norway, Russia, and Siberia. Birds shot in Norway in the month of April and at Omsk in May have still all the wing- and tail-coverts thickly mottled with rufous, and even retain a few feathers of the first plumage, so that one might expect to find males during the breeding-season retaining much of their juvenile plumage, or even breeding if the old ones allow them.

† Assuming male plumage.

v–a'. ♂ ♀ ad. et imm. sk.	Argyllshire, Dec.	F. Menteith Ogilvie, Esq. [P.].
b'. ♂ imm. sk.	Argyllshire, Nov.	Alfred Miller, Esq. [P.].
e', d'. ♀ ad. sk.	Dunipace, Larbert, Stirling, Nov.	J. A. Harvie Brown, Esq. [P.].
e'–f'. ♂ ad. et ♀ imm. sk.	Lammermuir Hills (*R. G. W. R.*).	Tweeddale Coll.
g'. Pull. sk.	England.	Purchased.
h', i'. ♂ ♀ ad. st.	Newcastle-on-Tyne.	Sir W. C. Trevelyan [P.].
k', l'. ♂ ad. et imm. sk.	Devonshire.	Montagu Coll.
m'. ♂ ad. sk.	Switzerland.	Gould Coll.
n'. ♂ imm. sk.	Carlsbad.	Lord Odo Russell [P.].
o', p'. ♀ ad. et pull. st.*	N. Europe.	Purchased.
q'. ♀ ad. st. [var.].	N. Europe.	J. Brenchley, Esq. [P.].
r'. ♂ imm. sk.	S. Norway, April (*F. D. G.*).	Salvin-Godman Coll.
s'–u'. ♂ ♀ imm. et pull. sk.	Norway, Jan., June, Nov.	Prof. R. Collett [P.].
v'–w'. ♀ ad. sk.*	Norway, Jan., Oct.	Prof. R. Collett [P.].
x', y'. ♀ imm. sk.	Swedeu.	Tweeddale Coll.
z', a''. ♂ ad. et ♀ imm. sk.	Helsingfors, March.	F. W. Forssell, Esq. [C.].
b'', e''. ♂ ♀ imm. sk.	Lithuria, Poland, April.	Dr. J. Stolzmann [P.].
d''–h''. ♂ ♀ imm. et juv. st. et sk.	Archangel.	Dr. R. Bowdler Sharpe [P.].
i'', k''. ♀ ad. sk.*	Perm, E. Russia, Nov., Dec.	Purchased.
l''. ♀ ad. sk.*	Caucasus.	Gould Coll.
m'', n''. ♂ ad. et imm. sk.	Omsk, May.	St. George Littledale, Esq. [P.].
o'', p''. ♂ ♀ imm. sk.	S. Manchuria.	H. E. M. James, Esq. [P.].
q''. Sternum.		J. Ray, Esq. [P.].
r''. Skull.		
s''. Skeleton.	Scotland.	Purchased.

Hybrid between Lyrurus tetrix *and* Lagopus scoticus.

Lagopus tetrici-scoticus, *Collett, Nyt Mag. Nat. Christ.* xxiii. p. 163 (1877); *id. P. Z. S.* 1886, p. 236.

Lagopotetrix dicksonii, *Malm, Œfv. Vet.-Ak. Förh.* 1880, p. 17; *Reich. & Schal. J. f. O.* 1882, p. 117.

Tetrao tetrix scoticus, *Meyer, Unser Auer-, Rackel- und Birkwild, etc.* p. 89, pl. xvi. (1887).

Black Game × Grouse, *Millais, Game B.* p. 40, pl. (1892).

Hybrid between Lyrurus tetrix *and* Lagopus lagopus.

Tetrao lagopoides, *Nilss. Ill. Skand. Faun.* i. pl. v. (1832); *id. Skand. Faun.* p. 83 (1835); *Collett, Forh. Vid. Selsk. Christ.* 1868, p. 158, and 1872, p. 242.

Lagopotetrix lagopoides, *Malm, Œfv. Kgl. Vet.-Akad. Förh.* 1880, p. 30.

Tetrao lagopides, *Nilss. Skand. Faun.* p. xxxii (1824), ed. 2, p. 87 (1858); *Collin, Skand. Fugle*, p. 416, *Suppl.* pl. 5 (1877).

Tetrix lagopides, *Sundev. Svensk. Fogl.* pl. xxxiv. figs. 3 & 4 (1856).

* Assuming male plumage.

Tetrao lagopodi-tetricides, *Sundev. Svensk. Fogl.* p. 255 (1856); *Collett, Forh. Vid. Selsk. Christ.* 1872, p. 242.
Tetrao canus ?, *Degl. & Gerbe, Orn. Europ.* ii. p. 50 (1867).
Lagopus tetrici-albus, *Collett, Forh. Vid. Selsk. Christ.* 1872, p. 238.
Tetrao lagopodo-tetrix, *Bogd. Consp. Av. Ross.* fasc. i. p. 37 (1884).
Tetrao albo-tetrix (hybridus), *Henke, Z. ges. Orn.* ii. p. 47, pl. iii. (1885) [♀].
Lagopus albus × Tetrao tetrix, *Henke, Z. ges. Orn.* 1886, p. 267; *Meyer, P. Z. S.* 1886, p. 419; *Collett, P. Z. S.* 1886, p. 224, pls. xxi., xxii.; *Henke, MT. Ver. Wien*, 1887, p. 126.
Tetrao tetrix albus, *Meyer, Unser Auer-, Rackel- und Birkwild, etc.* p. 75, pl. xiv. (1887).
Tetrao albus tetrix, *Meyer, Unser Auer-, Rackel- und Birkwild, etc.* p. 81, pl. xv. (1887).

a. ♂ ad. st. Norway. Prof. R. Collett [P.].

Hybrid between Lyrurus tetrix *and* Tetrastes bonasia.

Tetrao bonasides, *Nilss. Skand. Faun.* i. p. xxxii (1824).
Tetrao tetrix × Bonasa betulina, *Dresser, P. Z. S.* 1876, p. 345; *Pleske, Mém. Ac. Pétersb.* (7) xxxv. no. 5, p. 1, pl. fig. 1 (1887).
Tetrao bonasiotetrix, *Bogd. Consp. Av. Ross.* fasc. i. p. 36 (1884); *Kolth. Œfv. Ak. Förh.* 1891, p. 196.
Tetrao tetrix bonasia, *Meyer, Unser Auer-, Rackel- und Birkwild, etc.* p. 91, pl. xvi. (1887).

Hybrid between Lyrurus tetrix *and* Phasianus colchicus.

Tetrao tetrix × Phasianus colchicus, *Sabine, P. Z. S.* 1834, p. 52 [Cornwall]; *Eyton, P. Z. S.* 1835, p. 62; *Meyer, Nature*, xxxiv. p. 218; *Angus, Tr. N. H. Soc. Glasgow*, 1884–5, p. 260, pl. iii.; *Fritsch, MT. orn. Ver. Wien*, 1886, p. 98, pl.; *Tschusi u. Della-Torre, Ornis*, 1890, p. 134; *Millais, Game B.* p. 40, pl. (1892).
Tetrao tetrix colchicus, *Meyer, Unser Auer-, Rackel- und Birkwild, etc.* p. 93, pl. xvii. (1887).

a. ♂ ad. sk. Northumberland. Duke of Northumberland [P.].

2. Lyrurus mlokosiewiczi.

Tetrao tetrix, *Nordm. Obs. Faun. Pont.* p. 219 (1840).
Tetrao mlokosiewiczi, *Taez. P. Z. S.* 1875, p. 266, woodcuts [Eastern Caucasus]; *Dress. B. Eur.* v. p. 219, pl. 488 (1876); *v. Pelz. MT. orn. Ver. Wien*, 1877, p. 25; *Vian, Bull. Soc. Zool. Fr.* ii. p. 37 (1877); *Gould, B. As.* vi. pl. 66 (1879); *Seebohm, Ibis*, 1883, p. 26; *id. P. Z. S.* 1884, p. 409; *Radde, Orn. Caucas.* p. 358, pl. xxiii. (1884); *Bogd. Consp. Av. Ross.* fasc. i. p. 29 (1884); *Lorenz, Beitr. Orn. Caucas.* p. 46, pls. iii. & iv. (1887); *Meyer, Unser Auer-, Rackel- und Birkwild*, p. 18 (1887).
Tetrao acatoptricus, *Radde, Orn. Caucas.* p. 358 (1884); *id. J. f. O.* 1885, p. 79.

Adult male. General colour deep black; neck and mantle slightly glossed with bluish; primaries dark brown, lighter on the outer web; tarsi smoky brown: inner half of the under wing-coverts and axillaries pure white; under tail-coverts very short, falling far short of the middle tail-feathers; the outer tail-feathers curved

downwards and only slightly outwards. Bill black; naked skin and wattle above the eye scarlet; feet dark brownish horn. Total length 20 inches, wing 8, tail 8·2, tarsus 2.

Immature male (*after the first moult*). Feathers of the top of the head and ear-coverts rufous, tipped with buff and spotted and mottled with black; rest of the upper parts rufous buff, shading into greyish at the tips and finely mottled all over with black except on the scapulars and lesser wing-coverts, where the black markings are much coarser. Quills blackish brown; primaries and their coverts margined at the tip with white and most of the former margined with pale buff along the margin of the outer web; secondaries and their coverts also white-tipped, the former rather coarsely mottled with whitish on the outer parts of both webs; chin and sides of the head mostly white, spotted with black; lower part of throat uniform white; front of neck narrowly barred with whitish buff and black; breast, sides, and flanks greyish buff, thickly and finely mottled with black; middle of lower breast and belly brownish black; under tail-coverts rufous, barred with black and tipped with white; under wing-coverts and axillaries white. Tail and upper tail-coverts irregularly barred and mottled with rufous, buff, and black, the latter colour predominating on the outer pairs of tail-feathers, and all margined at the tip with white *.

Adult female. Generally resembles the immature male, but the tone on the upper parts is less grey and the markings on the plumage are much coarser; the top of the head, neck, mantle, and chest are barred with buff and black, all the scapulars and feathers of the lower back, rump, and upper tail-coverts have a black subterminal blotch; the tarsi are white, finely mottled with smoky brown, and the axillaries and under wing-coverts are white except a few of the outer ones, which are barred with black or grey. Total length 16·6 inches, wing 7·7, tail 5·5, tarsus 1·85.

Hab. Caucasus Mountains.

a. ♂ ad. sk.	Caucasus.	Gould Coll.
b–d. ♂ ad. et imm. sk.	Caucasus.	Count Branicki [P.].
e–g. ♂ ♀ ad. et ♂ imm. sk.	Ciscaucasia, Feb., Dec.	Purchased.

3. TETRAO †.

Type.

Tetrao, *Linn. S. N.* i. p. 273 (1766) ..... T. urogallus.
Urogallus, *Scop.* (*ex Gesner*), *Introd. Hist. Nat.* p. 478 (1777) ..... T. urogallus.

Tail composed of 18 feathers, rather long, rounded or wedge-shaped, the middle pair being much longer than the outer pair.

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* This female-like plumage is retained throughout the first year, probably till the second moult. In this respect this species differs entirely from *L. tetrix*, in which the young male attains his black plumage at the *first* moult and by December closely resembles the old male.

† Doubtful species, *Lagopus ferrugineus*, Fraser, P. Z. S. 1844, p. 37 (Mexico).

1st primary much shorter than the 2nd and about equal to the 8th, the 4th slightly the longest.

Tarsi feathered; toes naked, pectinated on the sides; tarsi shorter than the middle toe and claw.

Axillaries very long, pure white or white mixed with black and buff.

Range. Europe and North and Central Asia.

Key to the Species.

A. Mantle not barred with black. (*Males.*)
  a. Scapulars not tipped with white.
    a'. Breast and belly black, with a few of the feathers in the middle tipped with white. *urogallus*, p. 60.
    b'. Breast and belly mostly white, some of the feathers mottled with black towards the extremity ..... *uralensis*, p. 65.
  b. Scapulars widely tipped with white.
    c'. White tips narrower, forming an interrupted line of white spots ..... *parvirostris*, p. 66.
    d'. White tips wider, forming a continuous white band ..... *kamtschaticus*, p. 67.
B. Mantle strongly barred with black. (*Females.*)
  c. Breast and belly buff or whitish buff barred with black.
    e'. Darker; white tips to the scapulars narrower ..... *urogallus*, p. 60.
    f'. Paler; white tips to the scapulars much wider ..... *uralensis*, p. 65.
  d. Breast and belly black, barred with buff and tipped with white.
    g'. White tips of scapulars forming an interrupted line of white spots ..... *parvirostris*, p. 66.
    h'. White tips of scapulars forming a continuous white band ..... *kamtschaticus*, p. 67.

1. Tetrao urogallus.

Muscovian Black Game-cock, *Albin, N. H. Birds*, ii. p. 28, pls. 29, 30 (1738).

Urogallus major, *Briss. Orn.* i. p. 182 (1760).

Tetrao urogallus, *Linn. S. N.* i. p. 273 (1766); *Gm. S. N.* i. p. 746 (1788); *Lath. Ind. Orn.* ii. p. 634 (1790); *Shaw, Mus. Lever.* p. 221, pl. (1792); *Beseke, Beytr. Vög. Kurl.* p. 69 (1792); *Bechst. Nat. Deutschl.* iii. p. 470 (1793); *Pall. Zoogr. Rosso-As.* ii. p. 56 (1811); *Penn. Brit. Zool.* i. p. 347, pls. 44, 45 (1812); *Temm. Pig. et Gall.* iii. pp. 114, 696 (1815); *Nilss. Orn. Svec.* i. p. 297 (1817); *Steph. in Shaw's Gen. Zool.* xi. p. 266, pl. 18 (1819); *Brehm, Beitr. Vögelk.* ii. p. 604 (1822); *id. Lehrb. Europ. Vög.* i. p. 427 (1823); *Roux, Orn. Prov.* ii. p. 25, pls. 250, 251 (1830); *Nilss. Illum. fig. Skand. Faun.* i. pls. 55, 76 (1832); *Naum. Nat. Vög. Deutschl.* vi. p. 277, pls. 154, 155 (1833); *Schinz, Nat. Abbild. Vög.* p. 275, pl. 105 (1833); *Jard. Nat. Libr., Orn.* iv. p. 109, pl. 13 (1834); *Gould, B. Eur.* iv. pl. 248 (1837); *Macgill. Brit. B.* i. p. 138 (1837); *Démid. Voy. Russ. Mérid.* iii. p. 219 (1840); *Gray,*

List of B. pt. iii. *Gall.* p. 45 (1844); *Thomps. Nat. Hist. Irel.* ii. p. 31 (1850); *Middend. Sibir. Reis.* ii. pt. ii. p. 195 (1851); *Schinz, Nat. Vög.* p. 156, pl. 77 (1853); *Brandt in Hofmann, N. Ural Exp.* ii. App. p. 68 (1856); *Sundev. Svensk. Fogl.* pl. xxxii. figs. 1 & 2 (1856); *Nilss. Skand. Faun., Fog.* ii. p. 45 (1858); *Jaub. & Lapomm. Rich. Orn.* p. 428 (1859); *Godman, Ibis*, 1861, p. 85 [Bodö]; *Boner, Forest Creat.* p. 135 (1861); *Companyo, Hist. Nat. Pyrén.* iii. p. 196 (1863); *Radde, Ost-Sib.* ii. p. 297 (1863); *More, Ibis*, 1865, p. 425 [Gt. Britain]; *Elliot, Mon. Tetr.* pl. v. (1865); *Lilf. Ibis*, 1866, p. 383 [N. Spain]; *Degl. & Gerbe, Orn. Europ.* ii. p. 44 (1867); *Gray, List of B.* pt. v. *Gall.* p. 84 (1867); *Lloyd, Game B. Swed. & Norw.* p. 1, pls. (1867); *Collett, Vid. Selsk. Forh. Christ.* 1868, p. 157; *Elwes & Buckl. Ibis*, 1870, p. 327 [Balkan Mts. ?]; *Gray, Hand-l. B.* ii. p. 275 (1870); *Fritsch, Nat. Vög. Europ.* p. 288 (1870), pl. 31. figs. 3 &4 (1871); *Gray, B. West Scot.* p. 227 (1871); *Stejn. J. f. O.* 1871, p. 463 [S. Tyrol]; *Paton, Scot. Nat.* i. p. 114 (1871–2) [Perthshire]; *Collett, Vid. Selsk. Forh. Christ.* 1872, p. 234 [N. Norway]; *Gould, B. Gr. Brit.* iv. pl. 5 (1872); *Tacz. J. f. O.* 1873, p. 98; *Severtz. Turkest. Jevotnie*, p. 68 (1873); *Dress. B. Eur.* v. p. 223, pls. 489 [part] & 490 (1873); *Alst. & Brown, Ibis*, 1873, p. 66 [Archangel]; *Danf. & Brown, Ibis*, 1875, p. 417 [Transylvania]; *Severtz. J. f. O.* 1875, p. 181 [Central Asia]; *Schal. J. f. O.* 1876, p. 26 [Mark Brandenburg]; *Palm. J. f. O.* 1876, p. 41 [Finland]; *Seebohm & Brown, Ibis*, 1876, p. 221 [Lower Petchora]; *Dress. Ibis*, 1876, p. 322; *Tacz. Bull. Soc. Zool. Fr.* i. p. 243 (1876) [Irkutsk & Baikal] and ii. p. 153 (1877) [Poland]; *Collin, Skand. Fugle*, p. 412, *Suppl.* pl. 4 (1877); *Bau, etc. J. f. O.* 1877, p. 325 [Germany]; *Finsch, Ibis*, 1877, p. 65 [Obi R.]; *Liebe, J. f. O.* 1878, p. 75 [E. Hungary]; *Harvie-Brown, Capercaillie in Scotl.* pp. 155 (1879); *Seebohm, Ibis*, 1879, p. 147 [Yenisei]; *Brandt, J. f. O.* 1880, p. 241 [St. Petersburg]; *Cab. J. f. O.* 1880, pp. 71, 393 [Germany]; *Finsch, Verh. Ges. Wien*, xxix. p. 231 (1880) [Irtish]; *Büchn. u. Pleske, Beitr. Orn. St. Pet.* p. 88 (1881); *Gigl. Ibis*, 1881, p. 206 [Italian Alps]; *Schal. J. f. O.* 1881, p. 302 [Mark Brandenburg]; *Meyer, Vog.-Skel.* pl. xvi. (1881–2), pl. xlviii. (1883), pl. lii. (1884); *Booth, Rough Notes*, ii. pl. & text (1881–7); *Seebohm, Ibis*, 1882, p. 379 [Archangel]; *Irby, Ibis*, 1883, p. 185 [Santander]; *Cab. J. f. O.* 1883, p. 61, 1884, p. 38, 1885, p. 314, 1886, p. 341, 1887, p. 563 [Germany]; *Saund. Ibis*, 1884, p. 387 [Pyrenees]; *Saund. ed. Yarr. Brit. B.* iii. p. 45 (1884); *Stejn. Am. Nat.* 1884, p. 774; *Boyd. Consp. Av. Ross.* fasc. i. p. 24 (1884); *Seebohm, Hist. Brit. B.* ii. p. 440, pl. 21 (1884); *Homeyer, Zeit. ges. Orn.* i. p. 261 (1884) [Austria & Hungary]; *Csató, Zeit. ges. Orn.* ii. p. 481 (1885) [Hunyard]; *Wurm, Z. wiss. Zool.* xli. p. 728 (1885); *v. Graff, Z. wiss. Zool.* xli. p. 107, pl. vii. (1885); *Oustal. La Nat.* 1885, p. 279; *Schal. Zeit. ges. Orn.* ii. p. 13 (1885) [Mark Brandenburg]; *Pleske, Uebers. Vög. Kola*, p. 311 (1886); *Gigl. Av. Ital.* p. 343 (1886); *Olphe-Gall. Faun. Orn. Eur. Occ.* fasc. 37–40, p. 11 (1886); *Meyer, Unser Auer-, Rackel- und Birkwild, etc.* pp. 1–15, pls. 1–3 (1887); *Meyer & Helm, Zeit. ges. Orn.* iv. p. 369 (1888); *Pleske, Mém. Ac. St. Pét.* (7) xxxvi. no. 3, p. 47 (1888); *Severtz. Zeit. ges. Orn.* iv. p. 18 (1888) [Turkestan]; *Reiser, J. f. O.* 1888, p. 50; *Saund. Ill. Man. Brit. B.* p. 477 (1889); *Gigl. Av. Ital.* i. p. 532 (1889), ii. p. 662 (1890), iii. p. 507 (1891); *Schal. J. f. O.* 1890, p. 16; *Altum, J. f. O.* 1891, p. 99; *Saund. Ibis*, 1891, p. 185 [Switzerland]; *Hartert, Ibis*, 1892, p. 511 [E. Prussia]; *Millais, Game B.* pp. 1–20, pls. & woodcuts (1892).

Coq de Bruyère, *D'Aubent. Pl. Enl.* [Nos. 73 & 74].
Le Grand Coq de Bruyère, *Buff. Hist. Nat. Ois.* ii. p. 239 (1772).
Wood-Grouse, *Lath. Gen. Syn.* ii. pt. ii. p. 729 (1783); *Penn. Arct. Zool.* ii. p. 312 (1785); *Lath. Gen. Hist. B.* viii. p. 223 (1823).
Tetrao eremita, *Thunberg, Vet. Akad. Handl.* 1798, p. 179; *Nilss. Skand. Faun., Fog.* ii. p. 45 (1835) & p. 48 (1858).
Urogallus vulgaris, *Flem. Phil. Zool.* ii. p. 231 (1822); *Fitz. Atl. Nat., Vög.* fig. 242 (1864); *Salvad. El. Ucc. Ital.* p. 196 (1887).
Tetrao major, *Brehm, Handb. Vög. Deutschl.* p. 503 (1831); *id. Vogelf.* p. 260 (1855); *id. Nauman.* 1855, p. 287.
Tetrao crassirostris, *Brehm, Handb. Vög. Deutschl.* p. 504 (1831); *id. Vogelf.* p. 260 (1855); *id. Nauman.* 1855, p. 287.
Capercaillie, *Yarr. Brit. B.* ii. p. 289, fig. (1843).
Tetrao taczanowskii, *Meyer, Unser Auer-, Rackel- und Birkwild, etc.* p. 10 (1887).

Adult male. Head and neck dark grey, mottled with black and shading into dull black on the forehead, sides of head, chin, and throat, the latter being more or less glossed with green; mantle, lower back, and rump black, covered with wavy white lines; the interscapular region usually washed with reddish brown; wing-coverts and scapulars reddish brown, finely mottled with black; primaries, primary-coverts, and secondaries dark brown, the latter largely mottled with reddish brown on the outer web; the basal part of the outer web of the third to the sixth primaries and the tips of the secondaries are margined with white; the chest dark glossy green, shading into black on the breast and belly, most of the feathers down the middle of the belly and on the flanks tipped and mixed with white; vent and thighs mostly white; feathers on the tarsi brownish black; upper and under tail-coverts black tipped with white; tail black, an irregular marbled white band crossing the terminal half of the feathers. Axillaries and most of the under wing-coverts white, a few of the outermost ones dark brown. Bill yellowish horn-colour; feet dark leaden grey. Wattle above the eye scarlet. Total length 35 inches, wing 14·6, tail 12·3, tarsus 2·8.

Young males by December are similar to the above in plumage, but can be distinguished by their much smaller size and the absence of the marbled white band on the tail.

A quite young male has most of the upper parts dull reddish brown thickly mottled with black, a few feathers on the mantle have the ground-colour grey, and the upper tail-coverts are widely tipped with white; the wing-coverts, scapulars, and secondaries have whitish-buff tips extending for some distance up the shaft, and the secondaries are also irregularly mottled along the outer margin with pale buff; chin and throat whitish, neck mottled with black, chest and breast rufous-buff intermixed with a few black feathers; rest of underparts dirty white more or less mottled with dusky; tail-feathers dull brownish red, with marbled bars and tips of buff.

Adult female. Top and sides of the head, back and sides of the neck, mantle, back, rump, and upper tail-coverts black, barred with rufous buff and tipped with white except on the back; lesser, median,

and secondary coverts and secondaries the same, but the buff bars are broken up into irregular markings; the larger coverts, scapulars, and secondaries are tipped with white; primaries and primary-coverts dark brown, mottled with pale rufous on the outer web; chin, throat, and fore part of neck rufous buff, shading into darker rust-colour on the chest; breast, belly, sides, flanks, and under tail-coverts rufous buff, with a subterminal black bar and white tip to each feather; the under tail-coverts do *not extend nearly to the end of the middle tail-feathers*; tarsi dirty white, mottled with black. Tail chestnut, barred with black and tipped with white. Axillaries and the inner wing-coverts white, barred and marked with black and buff, outer coverts barred with black and buff and tipped with white. Bill brownish horn, paler at the tip and along the cutting-edges; feet greyish brown. Total length 25 inches, wing 11·7, tail 7·3, tarsus 2·1.

In some adult females the white ends to the feathers of the upper and under parts are almost or entirely absent. In these examples the whole breast and belly are rufous buff, the black subterminal bars are less marked, and only a few feathers down the middle of the belly and on the flanks are white-tipped. These differences are apparently due neither to age nor season, but represent a distinct "rufous phase" of coloration.

It is by no means rare for barren females to assume more or less the plumage of the male.

Hab. Europe, N. and Central Asia; ranging through the pine-forests westwards to Scotland, eastwards as far as Lake Baikal, and southwards to the Pyrenees, Alps, Carpathians, N.E. Turkestan, and Altai Mountains.

a. ♂ ad. sk.	Scotland.	Hume Coll.
b. ♂ ad. sk.	Scotland.	Purchased.
c. ♀ ad. sk.	Scotland.	Montagu Coll.
d. ♀ ad. st.	Perthshire.	Lt.-Col. L. H. Irby [P.].
e, f. ♂ ad. et imm. sk.	Killin, Perthshire, Dec.	Marquis of Breadalbane [P.].
g, h. ♂ ♀ ad. st.	Ballinluig, Perthshire, March.	Baron A. von Hügel [P.].
i–r. ♂ ♀ ad. et pull. st.	Buchanty, Perthshire, Nov.	C. H. Drummond Moray, Esq. [P.].
s. ♀ ad. sk.	Tillicoultry, Clackmannan, Dec.	Major R. G. Wardlaw Ramsay [P.].
t. ♀ ad. sk.	Dumblane, Stirlingshire, Oct.	W. R. Ogilvie Grant, Esq. [P.].
u. ♀ juv. st.	Norway.	Gould Coll.
v, w. Juv. sk.	Norway.	Purchased.
x–b'. ♂ ad., juv., pull. sk. et ♀ ad. st.	Norway, April, June, July.	Prof. Collett [P.].
c'. * ♀ ad. sk.	Norway, Oct.	Prof. Collett [P.].

* Female assuming male plumage.

d', *e'*. ♂ ♀ ad. sk.	Norway.	Salvin-Godman Coll.
f'. ♂ ad. sk.	Pyrenees, March.	A. B. Brooke, Esq. [C.].
g', *h'*. ♂ ♀ ad. sk.	Lithuania, Poland.	Dr. J. Stolzmann [P.].
i'. *♀ ad. st.	Russia.	J. Brenchley, Esq. [P.].
k', *l'*. ♂ ad. et pull. sk.	Archangel.	Dr. R. Bowdler Sharpe [P.].
m'. ♂ ad. sk.	Sloboda, Prov. Smolensk, April (*Prjevalsky*).	St. Petersburg Museum [E.].
n'. Skeleton.		Zool. Soc. Coll.
o', *p'*. Skulls.	Black Forest.	Dr. Günther [P.].

Hybrid between Tetrao urogallus *and* Lagopus lagopus ♂.

Lagopus urogallo-albus, *Grieg, Bergens Mus. Aarsber.* 1889, no. 5, pp. 1–13, pl.

Hybrid between Tetrao urogallus *and* Lyrurus tetrix.

Spurious Grous, *Lath. Gen. Syn.* ii. pt. ii. p. 734 (1783); *Suppl.* i. p. 214 (1787),

Hybrid Grous, *Lath. Gen. Hist. B.* viii. p. 230 (1823).

Rackelhahn, *auct.*

Tetrao hybridus, *Sparrm. Mus. Carls.* fasc. i. pl. 15 (1786); *Gould, B. Eur.* iv. pl. 249 (1837); *Gray, List of B.* pt. iii. *Gall.* p. 45 (1844); *Degl. & Gerbe, Orn. Europ.* ii. p. 49 (1867); *Olphe-Gall. Faun. Orn. Eur. Occ.* fasc. 37–40, p. 19 (1886).

Tetrao hybridus urogalloides, *Nilss. Ill. Skand. Faun.* i. pl. iv. (1832).

Tetrao medius, *Mey. Berl. Mag.* v. p. 337 (1811); *Temm. Man. d'Orn.* p. 287 (1815); *id. Pig. et Gall.* iii. pp. 129, 698 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 277 (1819); *Naum. Nat. Vög. Deutschl.* vi. p. 304, pl. 156 (1833); *Schinz, Nat. Abbild. Vög.* p. 277, pl. 105 (1833); *Companyo, Hist. Nat. Pyrén.* iii. p. 197 (1863); *Fritsch, Nat. Vög. Europ.* p. 289 (1870), pl. 31. fig. 6 (1871); *Danf. & Brown, Ibis*, 1875, p. 417 [Transylvania]; *Dybows. Zool. Anz.* ii. p. 400 (1879); *Meyer, Vog.-Skel.* pl. xlix. (1883), pl. li. (1884); *Cab. J. f. O.* 1884, p. 39 [Germany]; *Meyer, MT. orn. Ver. Wien*, 1884, p. 19 [Saxouy]; *Tschusi zu Schmidh. Ornis*, 1888, p. 517, pl. 11; *Altum, J. f. O.* 1891, p. 96; *Lorenz, J. f. O.* 1891, p. 405.

Tetrao intermedius, *Langsd. Mém. Acad. Pétersb.* iii. p. 236, pl. 14 (1811); *Twinn, Ibis*, 1860, p. 431 [Perthshire]; *Meyer, MT. orn. Ver. Wien*, 1881, pp. 72, 91; *Jäckel, Zool. Gart.* 1881, p. 103; *F., MT. orn. Ver. Wien*, 1884, p. 49 [Schleswig]; *Talsky, MT. orn. Ver. Wien*, 1884, p. 183 [Moravia]; *Schmidh. MT. orn. Ver. Wien*, 1884, p. 172, pl.

Tetrao urogallides, *Nilss. Skand. Faun.* i. p. xxxii (1824); *Nilss. Skand. Faun., Vog.* ii. p. 73 (1858); *Collin, Skand. Fugle*, p. 415 *Suppl.* pl. 5 (1877).

Tetrao urogalloides, *Nilss. Skand. Faun.* ii. p. 72 (1835); *Collett, Vid. Selsk. Forh. Christ.* 1868, p. 158.

Tetrao maculatus, *Brehm, Handb. Vög. Deutschl.* p. 504 (1831); *id. Voyelf.* p. 260 (1855); *id. Nauman.* p. 287 (1855).

Tetrao pseudourogallus, *Brehm, Nauman.* 1855, p. 287.

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* Female assuming male plumage.

Tetrao urogallo-tetrix, *Collett, Forh. Vid. Selsk. Christ.* 1872, p. 235 [N. Norway]; *Boyd. Consp. Av. Ross.* fasc. i. p. 35 (1884).
Tetrao tetrix *and* T. urogallus, *Dress. B. Eur.* v. p. 232, pl. 480, part. (1873).
Tetrao urogallus × T. tetrix, *Pleske, Uebers. Vög. Kola*, p. 316 (1886); *Millais, Game B.* p. 19, pl. (1892).
Tetrao tetrix urogallus, *Meyer, Unser Auer-, Rackel- und Birkwild, etc.* pp. 36–74, pls. 8–13 (1887).

Adult male. Intermediate in size between the males of *T. urogallus* and *L. tetrix*, and easily distinguished from both by the shape of the tail, which is emarginate and moderately forked, the outer feathers being rather more than an inch longer than the middle pair, the under tail-coverts considerably shorter than the middle tail-feathers, and the chin, throat, and chest are usually glossed with rich purple changing to dull greenish.

Adult female. Closely resembles the female of *L. tetrix*, but the tail-feathers are all subequal, and the under tail-coverts are much shorter than the middle pair.

Not uncommon and apparently, as a rule, fertile.

a, b. ♂ ♀ imm. sk. ct st.	N. Europe.	Purchased.
c. ♂ ad. sk.	Norway, Feb.	F. Bond, Esq. [P.].
d. ♂ ad. sk.	Norway.	Salvin-Godman Coll.
e–g. ♂ ad.; ♂ ♀ imm. sk.	Norway, Jan., Sept., Dec.	Prof. R. Collett [P.].
h. ♂ ad. sk.	Russia.	Hon. W. Rothschild [P.].
i. ♂ ad. sk.	Riasan, Russia, April.	Purchased.
k. ♂ ad. skeleton.	Norway.	Prof. R. Collett [P.].
l. Ad. skeleton.		Zool. Soc. Coll.
m, n. Ad. skeletons.	Norway.	Prof. R. Collett [P.].

Hybrid between Tetrao urogallus *and* T. hybridus.

Tetrao urogallus × Tetrao medius, *Fritsch, MT. orn. Ver. Wien*, 1887, p. 127 [Bohemia].

Hybrid between Tetrao urogallus *and* Phasianus colchicus.

Capercaillie × Pheasant, *Millais, Game B.* p. 20, pl. (1892).

Subsp. *a.* Tetrao uralensis.

Tetrao uralensis, *Nazarow, Bull. Mosc.* 1886, p. 365; *Meyer, Unser Auer-, Rackel- und Birkwild, etc.* p. 10 (1887).
Tetrao urogallus uralensis, *Menzb. Ibis*, 1887, p. 302 [S. Urals].

Adult male. Upper parts much paler than those of *T. urogallus*; the grey on the head, neck, back, upper tail-coverts, and sides predominates over the black, the reddish brown of the wing-coverts is much lighter, and the white tips to the tail-coverts wider. The

whole of the breast, belly, and underparts are white, most of the feathers of the former mottled with black at the tip; under tail-coverts black, with wide white tips and white shafts; the tail-feathers, especially the middle pair, are finely mottled with reddish grey and white, and the marbled white band across the tail is more marked. Total length 35 inches, wing 15·2, tail 12·2, tarsus 2·9.

Numerous examples in every intermediate stage of plumage between *T. urogallus* and the subspecies *T. uralensis* are to be met with in the London market, but I have been unable to find out what part of Russia they come from.

Adult female. Resembles the female of *T. urogallus*, but is much paler, all the rufous-buff markings in the latter being yellowish buff, and the white tips to the feathers, especially the scapulars and secondaries, more marked. Total length 24 inches, wing 11·3, tail 7·2, tarsus 2·2.

Hab. Ural Mountains.

a, *b*. ♂ ♀ ad. sk.	Orenburg, Russia, Nov.	Purchased.
c. ♀ ad. sk. (in almost complete male plumage).	Orenburg, Dec.	Purchased.
d. ♂ ad. sk.	St. Petersburg Market.	St. Petersburg Mus. [E.].

2. Tetrao parvirostris.

Tetrao urogallus, var. rupestris, *Pall. Zoogr. Rosso-As.* ii. p. 58, note 2 (1811).

Tetrao urogallus, var. minor, *Pall. Zoogr. Rosso-As.* ii. p. 58 (1811).

Tetrao urogalloïdes, *Middend.* (*nec Nilss.*) *Sibir. Reise*, ii. pt. ii. p. 195, pl. xviii. (1851) [Daouria]; *Schr. Reis. Amur-L.* i. p. 396 (1859); *Nordm. Bull. Soc. Mosc.* xxxiv. p. 261 (1861) [Amoor]; *Radde, Ost-Sib.* ii. p. 299 (1863); *Elliot, Mon. Tetr.* pl. vi. (1865); *Dybow. J. f. O.* 1868, p. 336 [Daouria]; *Tacz. J. f. O.* 1873, p. 98; *id. Bull. Soc. Zool. Fr.* i. p. 243 (1876) [Transbaikal]; *David & Oustal. Ois. Chine*, p. 390 (1877); *Tacz. Bull. Soc. Zool. Fr.* viii. p. 333 (1883); *Bogd. Consp. Av. Ross.* fasc. i. p. 24 (1884); *Meyer, Unser Auer-, Rackel- und Birkwild, etc.* p. 8 (1887).

Tetrao parvirostris, *Bp. C. R.* xlii. p. 880 (1856); *Gray, List of B.* pt. v. *Gall.* p. 85 (1867); *id. Hand-l. B.* ii. p. 276 (1870).

Tetrao urogalloides, var. sachalinensis, *Bogd. Consp. Av. Ross.* fasc. i. p. 122 (1884) [Isl. of Saghalien].

Tetrao sachalinensis, *Meyer, Unser Auer-, Rackel- und Birkwild, etc.* p. 9 (1887).

Adult male. Head and neck black, darker than in *T. kamtschaticus*, uniformly glossed with blue, and with green on the throat and cheeks; back uniform blackish brown, with a slight bluish gloss, and very finely vermiculated with white; scapulars, wing-coverts, and secondaries brownish black, finely vermiculated with yellow, and all except the lesser wing-coverts with a large white spot at the tip; primaries dark brown, with the outer webs of the third to the sixth partly margined with white; upper tail-coverts black, largely tipped with white, the *tips forming an interrupted line of*

spots; under wing-coverts white, smoky brown towards the edge; throat and upper breast dark metallic green; lower breast and abdomen brownish black, the feathers glossed with green at the margins; flanks indistinctly vermiculated, the white spots are reduced to small dots scattered over the sides of the abdomen. Under tail-coverts black, tipped with white. Tail uniform dark black. Tarsi covered with smoky brown feathers. Naked skin round the eye scarlet; bill black, much smaller than in *T. urogallus*; toes dark grey. Total length 35 inches, wing 15, tail 14·8, tarsus 2·7.

Adult female. Feathers of the top of the head rufous, marked with black spots glossed with blue and tipped with white; back of the neck barred with rufous, black, and white: back and upper tail-coverts black, finely barred with rufous and irregularly edged with yellow; scapulars black, barred with yellow and widely tipped with white, the tips *forming an interrupted line of spots*; wing-coverts brownish black tipped with whitish yellow, the greater and lesser ending in a large isolated white spot. Flight-feathers greyish brown, outer webs of the third to the sixth primaries finely edged with white; secondaries finely mottled with rufous on the outer web and narrowly margined with white; sides of the head more rufous than in *T. kamtschaticus* and with larger black dots; throat reddish buff, barred with black, the lower parts edged with white; neck rufous, barred with black and more or less spotted with white; chest black, glossed with green, barred with fine bands of rufous and tipped with white; breast and belly black, barred with buff and tipped with white, upon the flanks the white margins are dotted with black; under tail-coverts black, tipped with white and with a subterminal V-shaped rufous bar. Tail blackish brown, irregularly barred with rufous and tipped with white. Tarsus smoky grey. Total length 25 inches, wing 11·6, tail 7·7, tarsus 1·7.

Hab. N.E. Siberia, east of Lake Baikal, and Saghalien Island. It is not found in Kamtschatka.

a, b. ♂ ♀ ad. sk. Saghalien Is. (*Dr. Suprunenko*). St. Petersburg Mus. [E.].

3. Tetrao kamtschaticus.

Tetrao kamtschaticus, *Kittl. Reise Kamtschatka*, ii. p. 353, woodcut (1858); *Meyer, Unser Auer-, Rackel- und Birkwild, etc.* p. 9 (1887).

Tetrao camtschaticus, *Tacz. Bull. Soc. Zool. Fr.* viii. p. 333 (1883).

Adult male. Head and neck black, slightly glossed with blue, and with green on the long plumes of the throat; back greyish black, finely vermiculated with white, shading into rufous on the inter-scapular region; scapulars the same, the wing-coverts and secondaries greyer, and all except the lesser coverts are largely tipped with white; flight-feathers dark grey, the outer web of the primaries, from the second to the seventh, with the basal part margined with white; under wing-coverts white, mixed with dark

grey; upper tail-coverts dark grey, vermiculated with white on the sides and largely tipped with white, *the white tips forming a continuous white band*; throat and upper breast dark metallic green; lower breast and belly black, vermiculated on the sides and flanks with white, and largely tipped with the same colour, the spots becoming smaller towards the middle of the belly, and increasing in size towards the under tail-coverts, which are black with wide white tips; tail black, the middle feathers vermiculated nearly all over with white. Tarsi covered with smoky-brown feathers. Naked skin round the eye red; bill black; feet horny grey. Total length 30 inches, wing 14·1, tail 11, tarsus 2·7.

Adult female. Differs from the female of *T. parvirostris* chiefly in having the top of the head blacker and more widely margined with white; the upper tail-coverts brown, barred with rufous and largely tipped with white, the wide white tips to the scapulars *forming a continuous white band*, and the tarsi white, slightly variegated with brown. Total length 22 inches, wing 11·1, tail 6·4, tarsus 2·0.

Hab. Kamtschatka.

a. ♂ imm. sk.	Kamtschatka.	Purchased.

4. CANACHITES.

	Type.
Canace, *Reich.* (*nec Curtis*, Dipt. 1838) *Nat. Syst. Vög.* p. xxix (1852)	C. canadensis.
Canachites, *Stejn. P. U.S. Nat. Mus.* viii. p. 409 (1885)	C. canadensis.

Tail composed of 16 feathers, moderately long and somewhat rounded, the outer pair not much shorter than the central pair.

1st primary much shorter than the 2nd, and about equal to the 7th; 4th somewhat the longest.

Axillaries long and dark grey with white shaft and tip.

Middle toe and claw longer than the tarsus by about the length of the claw.

Tarsi feathered; toes naked, and pectinated on the sides.

Range. Northern parts of N. America.

Key to the Species.

A. Upper tail-coverts edged or tipped with grey; tail with a well-marked terminal rufous band.	
a. Chin and throat black	*canadensis* ♂, p. 69.
b. Chin and throat rufous, spotted with black.	*canadensis* ♀, p. 69.
B. Upper tail-coverts tipped with white, no terminal band to tail.	
c. Chin and throat black	*franklini* ♂, p. 71.
d. Chin and throat rufous, spotted with black.	*franklini* ♀, p. 71.

1. Canachites canadensis.

Brown and Spotted Heathcock, *Edw. Nat. Hist. B.* ii. pl. 71 (1747).

Black and Spotted Heathcock, *Edw. Glean.* iii. p. 118, pl. 118 (1750).

Gélinote de Canada, *Briss. Orn.* i. p. 203, pl. xx. (1760).

La Gélinote de la Baye de Hudson, *Briss. Orn.* i. p. 201 (1760).

Tetrao canadensis, *Linn. S. N.* i. p. 274 (1766); *Forst. Phil. Trans.* lxii. p. 389 (1772); *Gm. S. N.* i. pt. ii. p. 749 (1788); *Lath. Ind. Orn.* ii. p. 637 (1790); *Temm. Pig. et Gall.* iii. pp. 160 bis, 702 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 275 (1819); *Sabine, Frankl. Exp.* i. App. p. 683 (1823); *Bonap. Am. Orn.* iii. pl. 21. fig. 2, ♀ (1828); *id. Trans. Am. Phil. Soc.* iii. p. 391 (1830); *Swains. & Rich. F. Bor.-Amer.* ii. p. 346, pl. lxii. ♀ (1831); *Nutt. Man. Orn.* i. p. 667 (1832); *Jard. Nat. Libr., Orn.* iv. p. 125, pl. xv. (1834); *Aud. Orn. Biol.* ii. p. 437, pl. clxxvi. (1834), v. p. 563 (1839); *id. B. Amer.* v. p. 83, pl. ccxciv. (1842); *Gray, List of B.* pt. iii. *Gall.* p. 45 (1844) [part.]; *Baird, B. N. Amer.* p. 622 (1860); *Coues, P. Ac. Philad.* 1861, p. 226 [Hudson Bay to Maine and N. York]; *Blakist. Ibis,* 1863, p. 122 [Fort Carlton]; *Baird, Ibis,* 1867, pp. 268, 271; *Gray, List of B.* pt. v. *Gall.* p. 86 (1867); *Dall & Bann. Tr. Chicago Ac.* i. p. 287 (1869) [Nulato]; *Gray, Hand-l. B.* ii. p. 276 (1870); *Maynard, B. E. Mass.* p. 138 (1870) [Massachusetts]; *Finsch, Abh. nat. Ver. Brem.* iii. p. 61 (1872); *Merr. Nutt. Orn. C.* iii. p. 53 (1878) [N. York]; *Brewst. Nutt. Orn. C.* iv. p. 43 (1879); *Maynard, B. E. N. Amer.* p. 347 (1881); *Hartl. J. f. O.* 1883, p. 276 [Portage Bay and Chilcat, Alaska].

Tetrao canace, *Linn. S. N.* i. p. 275 (1766); *Gm. S. N.* i. pt. ii. p. 749 (1788).

Spotted Grous, *Lath. Gen. Syn.* ii. pt. ii. p. 735 (1783), *Suppl.* i. p. 214 (1787); *Penn. Arct. Zool.* ii. p. 307 (1785); *Lath. Gen. Hist. B.* viii. p. 232 (1823).

Canace canadensis, *Reich. Av. Syst. Nat.* p. xxix (1851); *Bonap. C. R.* xlv. p. 428 (1857); *Elliot, P. Ac. Philad.* 1864, p. 23; *id. Mon. Tetr.* pl. ix. (1865); *Merr. Nutt. Orn. C.* vi. p. 233 (1881) [N. York], & vii. p. 238 (1882) [Canada]; *Coues, Key,* p. 578 (1884).

Canace canadensis, var. canadensis, *Baird, Brew., & Ridgw. N. Am. B.* iii. p. 416 (1874).

Dendragapus canadensis, *Turner, P. U. S. Nat. Mus.* viii. p. 245 (1885) [Fort Chimo]; *Ridgw. P. U. S. Nat. Mus.* viii. p. 355 (1885); *Turner, Cont. N. H. Alaska,* p. 152 (1886) [Yukon Valley]; *A. O. U. Check-l.* p. 171 (1886); *Fish. J. Cincinn. Soc.* x. p. 205 (1887); *Towns. Auk,* iv. p. 12 (1887) [N. Alaska]; *Chadb. Auk,* iv. p. 103 (1887) [N. Hampshire]; *Ridgw. Man.* p. 196 (1887); *Thompson, P. U. S. Nat. Mus.* xiii. p. 507 (1891) [Manitoba].

Dendragopus canadensis, *Seton, Auk,* iii. p. 153 (1886) [Manitoba].

Adult male. Top of the head, back and sides of the neck, back, and rump grey, barred with black, the bars, especially on the lower back and rump, being concentric: a band of blackish feathers across the mantle, barred with rufous grey; scapulars, lesser, median, and secondary coverts, and a few of the outer secondaries sandy or

rufous white, mottled and barred with black, the scapulars and some of the median coverts with a white shaft-spot dilated at the extremity; primaries, primary-coverts, and rest of secondaries dark brown, the quills being more or less margined with buff round the outer web and tip; upper tail-coverts black, mottled with rufous grey and tipped with grey; a small patch of black and white feathers behind the bare skin surrounding the eye, and a similar spot behind the lores; chin, throat, chest, and middle of breast black; throat surrounded by an irregularly marked white band; fore part of the neck brownish black, tipped with rufous grey or white; sides of the breast and belly black, widely tipped with white; sides and flanks like the scapulars; vent white; under tail-coverts black, widely tipped with white; tail black, slightly mottled with rufous towards the base, and tipped with chestnut. Total length 15·5 inches, wing 6·8, tail 4·8, tarsus 1·4.

Immature males and females after the first moult cannot be distinguished from the adults, except by the more pointed first primary.

Adult female. Top of the head, neck, mantle, lower back, rump, and upper tail-coverts black, barred with pale rufous yellow, and, especially on the three latter, tipped with grey; lesser, median, and secondary coverts and scapulars similar to the back, but the rufous bars are irregular and broken up into mottlings; as in the male, the scapulars and a few of the coverts have dilated white shaft-spots at the extremity; quills and primary-coverts as in the male; lores, chin, and throat pale rufous and whitish yellow, barred and spotted with black; fore part of neck and chest pale rufous, barred with black; breast, belly, and under tail-coverts the same, but tipped with white; sides and flanks like the scapulars; vent white; tail as in the male, but irregularly barred with rufous; in very old specimens most of the barrings disappear, and only the bases of the outer feathers are finely mottled with pale rufous. Total length 14·2 inches, wing 6·8, tail 4, tarsus 1·4.

Hab. Northern N. America, ranging westwards to the east side of the Rocky Mountains, eastwards to New England and New York, northwards to Alaska, and south to Minnesota.

a–c. ♂ ♀ ad. et ♂ imm. sk.	N. America.	Hudson's Bay Co. [P.].
d–f. ♂ ♀ ad. sk. et st.	N. America.	J. J. Audubon, Esq. [C.].
g, h. ♂ ad. st. et ♀ imm. sk.	North Land Exp.	Admiral Sir G. Back [P.].
i. ♀ ad. sk.	Nulato, Alaska, March (*E. W. Nelson*).	Salvin-Godman Coll.
k, l. ♂ ad. et imm. sk.	Fort Reliance, Alaska, Oct. (*E. W. Nelson*).	Salvin-Godman Coll.
m–q. ♂ ad. sk. et ♀ ad. st.	Fort Simpson, April.	B. R. Ross, Esq. [P.].
r. ♀ ad. sk.	Fort Simpson, March (*B. R. Ross*).	A. Murray, Esq. [P.].
s. ♀ ad. sk.	Jaspers House, May.	
t. ♂ ad. sk.	Repulse Bay.	Dr. J. Rae [P.].

u, *v*. ♀ imm. et juv. sk.	Fort Chimo, Ungava, Aug., Sept. (*L. M. Turner*).	Salvin-Godman Coll.
w, *x*. ♂ imm. et ♀* ad. sk.	Ungava "Forks," Dec. (*L. M. Turner*).	Salvin-Godman Coll.
y. Pull. sk.	New Brunswick, May (*G. A. Boardman*).	Salvin-Godman Coll.
z. ♂ ad. sk.	Musquash, New Brunswick, Dec. (*A. R. Dresser*).	Salvin-Godman Coll.
a', *b'*. ♀ ad. sk.	Maine, Oct., Nov. (*M. Hardy*).	Salvin-Godman Coll.
c', *d'*. ♂ ♀ imm. sk.	St. Croix River, Maine (*G. A. Boardman*).	Salvin-Godman Coll.
e'. ♂ ad. sk.	Bay of Fundy, Maine (*G. A. Boardman*).	Salvin-Godman Coll.
f'. ♂ ad. sk.	Sebowis Lake, Maine, Nov. (*M. Hardy*).	Salvin-Godman Coll.
g', *h'*. ♀ imm. sk.	Lake Terror, New York, Nov. (*C. H. Merriam*).	Salvin-Godman Coll.
i'. ♂ ad. sk.	Watson, New York, Dec. (*A. J. Dayan*).	Salvin-Godman Coll.
l'. Skeleton.		

2. Canachites franklini.

Gélinote du Canada, *D'Aubent. Pl. Enl.* ii. pls. 22 & 23 [nos. 131, 132].

? Tetrao fusca, *Ord*, *Guthrie's Geog.* (2nd Am. ed.) ii. p. 317 (1815).

Tetrao canadensis, *Bonap.* (*nec L.*) *Am. Orn.* iii. p. 47, pl. xx. (1828).

? Lagopus ludoviciana, *Griff. ed. Cuv.* iii. p. 263, pl. (1829).

Tetrao franklinii, *Dougl. Trans. Linn. Soc.* xvi. p. 139 (1829) [W. of Rocky Mts., lat. 50°–54°]; *Swains. & Rich. F. Bor.-Amer.* ii. p. 348, pl. lxi. (1831); *Baird, B. N. Amer.* p. 623 (1860); *Coop. & Suckl. Rep. Expl. Miss. Riv.* xii. no. 3, p. 221 (1860); *Elakist. Ibis*, 1862, p. 8 [W. of Rocky Mts., 49° N.], & 1863, p. 122; *Lord, P. R. Art Inst.* iv. p. 123 (1864); *id. Brit. Columb.* ii. p. 164 (1866) [between Cascades and Rocky Mts.]; *Baird, Ibis*, 1867, p. 271; *Gray, List of B.* pt. v. *Gall.* p. 86 (1867); *id. Hand-l. B.* ii. p. 276 (1870); *Coop. Calif. Orn.* i. p. 529 (1870).

Canace franklinii, *Elliot, P. Ac. Philad.* 1864, p. 23; *id. Monogr. Tetr.* pl. x. (1865).

Canace canadensis, var. franklini, *Baird, Brew., & Ridgw. N. Amer. B.* iii. p. 419 (1874).

Tetrao canadensis franklini, *Coues, Bull. U.S. Geol. Surv.* iv. p. 628 (1878) [Rocky Mts., Lat. 49°]; *Williams, Nutt. Orn. C.* vii. p. 61 (1882) [Montana].

Cnace canadensis franklini, *Coues, Key*, p. 579 (1884).

Dndragapus franklinii, *Ridgw. P. U.S. Nat. Mus.* viii. p. 355 1885); *id. A. O. U. Check-l.* p. 172 (1886); *Ridgw. Man.* p. 196 1887).

Adult male. Differs from adult male of *C. canadensis* chiefly in having the ground-colour of the back and rump brownish grey instead of grey, the upper tail-coverts tipped with white, and the tail-feathers without any chestnut terminal band. Total length 15 inches, wing 7·2, tail 5·2, tarsus 1·6.

Adult female. Can easily be distinguished from the female of

* Assuming male plumage.

C. canadensis by having the upper tail-coverts tipped with white instead of grey. Total length 14 inches, wing 7, tail 4·4, tarsus 1·6.

Hab. West side of northern Rocky Mountains, ranging westwards to the coast-ranges.

a. ♂ ad. sk.	N. America.	Dr. Richardson [P.].
b. Juv. st.	N. W. America.	Gould Coll.
c–k. ♂ ♀ ad., imm., pull. sk. et st.	W. side Rocky Mts.	J. K. Lord, Esq.[P.].

5. FALCIPENNIS.

Type.

Falcipennis, *Elliot*, *P. Ac. Philad.* 1864, p. 23 .... F. falcipennis.

Tail composed of 16 feathers, moderately long and rounded.

Outer primaries attenuated and sickle-shaped; 1st primary much shorter than the 2nd, and falls between the 7th and 8th; 4th is slightly longer than the 3rd and 5th.

Tarsus shorter than the middle toe and claw by the length of the claw.

Axillaries long, dark grey mixed with white.

Range. North-eastern Siberia; Kamtschatka; Saghalien Island.

1. Falcipennis falcipennis.

Tetrao canadensis, var. franklinii, *Middend. Sibir. Reis., Aves*, p. 202, pl. 17. fig. 4 (1851) [Daouria]; *Schr. Reis. Amur-L.* i. p. 399 (1859).

Tetrao falcipennis, *Hartl. J. f. O.* 1855, p. 39; *Gray, List of B. Gall.* p. 87 (1867); *id. Hand-l. B.* ii. p. 276 (1870).

Tetrao canadensis, *Radde, Ost-Sib.* ii. p. 301 (1863).

Tetrao franklinii, *Swinh. P. Z. S.* 1863, p. 338 [Amoorland].

Falcipennis hartlaubi, *Elliot, P. Ac. Philad.* 1864, p. 23; *id. Mon. Tetr.* pl. xi. (1865).

Canace falcipennis, *Tacz. Bull. Soc. Zool. Fr.* i. p. 242 (1876); *Bogd. Consp. Av. Ross.* fasc. i. p. 30 (1884).

Adult male. General colour above black, barred with greyish and sandy buff; top of the head dark grey, indistinctly mottled with black; mantle black, tipped with sandy buff; lower back, rump, upper tail-coverts, scapulars, and wing-coverts mottled and edged with sandy buff, the scapulars, lower back, and rump with white shaft-spots at the extremity; primaries, primary-coverts, secondaries, and the outer wing-coverts with the ground-colour brown, the secondaries narrowly tipped and margined round the outer web with white; chin, throat, and cheeks black, a small patch behind the eye and the base of the throat mostly white; fore part and sides of upper neck black, barred with buff; fore part and sides of lower neck dark smoky black, becoming paler on the chest and middle of the belly; rest of underparts smoky black, each feather with a wide subterminal white cross bar, gradually changing into heart-shaped spots on the sides and flanks; vent white; under tail-coverts and tail black, widely tipped with white, except the two middle tail-feathers, which have the extremities mottled with greyish and with an irregular subterminal white spot. Total length 16·5 inches, wing 7·2, tail 4·7, tarsus 1·4.

Immature male. Still retains, among the scapulars, feathers largely barred and mottled with rufous and with buff shaft-stripes; the sides of the neck are mottled and barred with rufous buff; the white marks on the feathers of the underparts are nearly all heart-shaped; and the outer primaries are tipped with buff, and even more acute than in the adult.

Adult female. Differs from the male in having the head and neck barred with black and buff and tipped with sandy; mantle black, with a subterminal buff bar, and mottled with sandy at the extremity; lower back, rump, and upper tail-coverts mottled with rufous grey and black, tipped with sandy grey, and with a subterminal pale buff shaft-spot; chin, throat, and sides of the head more or less mixed with white; neck and chest black, barred with buff; breast greyish black, with a wide white subterminal patch to each feather; the feathers of the sides, flanks, and under tail-coverts similar, but with the basal part thickly mottled with sandy buff; the outer webs of the outer tail-feathers more or less margined and mottled with buff. Total length 14·7 inches, wing 7·2, tail 4·3, tarsus 1·4.

Hab. Same as that of the genus.

a. ♂ ad. sk.	Kamtschatka.	M. Brandt [C.].
b–d. ♂ ♀ ad. sk.	Saghalien Is. (*Dr. Suprunenko*).	St. Petersburg Mus. [E.].

6. DENDRAGAPUS.

Dendragapus, *Elliot, P. Ac. Philad.* 1864, p. 23..... Type. D. obscurus.

Tail composed of 20 feathers, elongate, truncate, and subequal.

Male with a distinct inflatable air-sac on each side of the neck.

The 1st primary is much shorter than the 2nd, and falls between the 7th and 8th; the 4th is *slightly* the longest.

Axillaries long and white.

Middle toe and claw longer than the tarsus.

Range. N. America.

Key to the Species.

A. Chest and breast not barred and marked with buff. (*Males.*)
  a. Tail somewhat rounded and with a terminal grey band.
    a'. Band wider, varying on the middle feathers from 1 to 1·5 inch ..... *obscurus*, p. 74.
    b'. Band narrower, less than an inch wide on the middle feathers ..... *fuliginosus*, p. 75.
  b. Tail square, without a terminal grey band, but the tips of the feathers have narrow grey margins ..... *richardsoni*, p. 76.

B. Chest and breast barred and marked with buff. (*Females.*)
  c. Tail with a terminal grey band.
    c'. Band wider, about 0·8 inch on the outermost feathers ..... *obscurus*, p. 74.

d'. Band narrower, about 0·5 inch on the outermost feathers ..... *fuliginosus*, p. 75.
d. Tail narrowly margined with grey, but without any terminal band ..... *richardsoni*, p. 76.

1. Dendragapus obscurus.

Tetrao obscurus, *Say, Long's Exp. R. Mts.* ii. p. 14 (1823); *Bonap. Am. Orn.* iii. p. 27, pl. xviii. (1828); *id. Trans. Am. Phil. Soc.* iii. p. 391 (1830); *Nutt. Man. Orn.* p. 666 (1832); *Sclat. P. Z. S.* 1858, p. 1 [Trinity Mts., N. California]; *Baird, B. N. Am.* p. 620 (1860); *Gray, List Gallinæ Brit. Mus.* p. 86 (1867) [part.]; *id. Hand-l. B.* ii. p. 276 (1870); *Cooper, Calif. Orn.* i. p. 526 (1870) [part.]; *Scott, Nutt. Orn. C.* iv. p. 96 (1879) [Colorado]; *Drew, Nutt. Orn. C.* vi. p. 142 (1881) [Colorado].

Canace obscura, *Bonap. C. R.* xlv. p. 428 (1857); *Belding, P. U. S. Nat. Mus.* i. p. 438 (1878) [Central California]; *Mearns, Bull. Nutt. Orn. C.* iv. p. 197 (1879) [Ft. Klamath]; *Coues, Key*, p. 579 (1884); *Drew, Auk*, ii. p. 17 (1885) [Colorado]; *Hensh. Auk*, iii. p. 80 (1886) [N. Mexico].

Dendragapus obscurus, *Elliot, P. Ac. Philad.* 1864, p. 23; *id. Mon. Tetr.* pl. vii. (1865); *A. O. U. Check-l.* p. 170 (1886); *Ridgw. Man.* p. 195 (1887); *Mearns, Auk*, vii. p. 52 (1890) [Arizona].

Canace obscurus, var. obscurus, *Baird, Brew., & Ridgw. N. Amer. B.* iii. p. 422 (1874).

Adult male. General colour above smoky black, mottled, especially on the lower back, rump, and upper tail-coverts, with grey; wing-coverts, scapulars, and outer secondaries mottled and irregularly barred with brown, most of the median wing-coverts and scapulars with terminal white shaft-spots; primaries and rest of secondaries brownish black, the latter irregularly margined and tipped with whitish; lores, chin, and throat white, spotted with black, cheeks smoky black; a dark smoky-black band across the sides and fore part of the neck; axillaries and most of the under wing-coverts pure white, a hidden white patch on each side of the neck; chest, breast, and belly light grey, each feather narrowly margined with white; sides like the scapulars; flanks and under tail-coverts grey, mottled and barred with black, and with white shafts and tips; tail black, widely tipped with dark grey, the band on the middle feathers varying in width from 1 to 1·5 inch, and on the outermost feathers from 0·5 to 0·8 inch. Total length 19·5 inches, wing 10, tail 6·7, tarsus 1·7.

Immature male. Has the plumage very similar to the female, but the feathers of the chest are not barred with buff; the outer primaries are pointed and mottled with buff towards the tip.

Adult female. General colour above smoky black, barred, especially on the top of the head, mantle, and scapulars, with buff, and mottled towards the tips of the scapulars, wing-coverts, rump, and upper tail-coverts with pale sandy buff; quills as in the male, but the outer margins of the secondaries have the whitish-buff markings coarser and more broken up; lores, chin, and throat white, spotted with black; axillaries and most of the under wing-coverts pure white; chest and upper breast grey, barred with buff and black

round the fore part of the neck; lower breast and belly grey; sides and flanks black, barred and mottled with buff, and tipped with white like the scapulars; under tail-coverts similar in markings, but greyer; tail black, with a wide grey terminal band, finely mottled with black, the middle pair of tail-feathers with irregular bars of buff. Total length 17 inches, wing 8·6, tail 5·9, tarsus 1·6.

Immature female. Differs only from the adult in the pointed shape of the first primaries.

Young birds have pale shaft-stripes to the feathers of the mantle, scapulars, wing-coverts, outer secondaries, and chest; in a *very young bird* the chin, throat, lower breast, and belly are white, and the rest of the underparts are white spotted with black.

Hab. Rocky Mountains, west to the Wahsatch, south to New Mexico and Arizona, and north to the South Pass.

a. Juv. sk.	N.W. America.	Capt. Kellett and Lieut. Wood [P.].
b. ♂ ad. sk.	N.W. America.	Salvin-Godman Coll.
c. ♂ imm. sk.	San Francisco Market, Dec.	Salvin-Godman Coll.
d. ♂ imm. sk.	Salt Lake, Utah, Aug. (*E. W. Nelson*).	Salvin-Godman Coll.
e. ♂ imm. sk.	Colorado (*Mrs. Maxwell*).	Salvin-Godman Coll.
f. ♂ imm. sk.	North Park, Colorado, April (*E. Coues*).	Salvin-Godman Coll.
g–l. ♀ ad. et ♂ ♀ juv. sk.	Santa Fé Mts., New Mexico, Aug. (*H. W. Henshaw*).	Salvin-Godman Coll.
m. ♀ ad. sk.	Burgwin Cantonment, Mar. (*W. W. Anderson*).	Salvin-Godman Coll.
n. ♀ imm. sk.	North Fork, Indian Territory, May (*C. H. Merriam*).	Salvin-Godman Coll.

Subsp. *a.* Dendragapus fuliginosus.

Tetrao obscurus, ? *Newb. P. R. R. Rep.* vi. pt. iv. p. 93 (1857); *Coop. & Suckl. Rep. Expl. Miss. Riv.* xii. no. 3, p. 219 (1860); *Lord, P. R. Art Inst.* i. p. 122 (1863); *id. Brit. Columb.* ii. pp. 163, 298 (1866) [Vancouver Isl., British Columbia]; *Brown, Ibis*, 1868, p. 423 [Vancouver Isl.]; *Dall & Bann. Trans. Chicago Ac.* i. p. 287 (1869) [Sitka]; *Finsch, Abh. nat. Ver. Brem.* iii. p. 61 (1873).

Canace obscurus, var. fuliginosus, *Baird, Brew., & Ridgw. N. Amer. B.* iii. p. 425 (1874).

Tetrao obscurus fuliginosus, *Hartl. J. f. O.* 1883, p. 275 [Portage Bay, Alaska].

Canace obscura fuliginosa, *Coues, Key*, p. 580 (1884).

Dendragapus obscurus fuliginosus, *Ridgw. P. U.S. Nat. Mus.* viii. p. 355 (1885); *Anth. Auk*, iii. p. 164 (1886) [Oregon]; *A. O. U. Check-l.* p. 171 (1886); *Townsend, P. U.S. Nat. Mus.* x. pp. 200, 235 (1887) [N. California]; *Ridgw. Man.* p. 196 (1887); *Merrill, Auk*, v. p. 145 (1888) [Oregon]; *Bendire, Auk*, vi. p. 32 (1889).

Adult male. Differs chiefly from the male of *D. obscurus* in having the grey band across the tip of the tail narrower, less than an inch wide on the middle feathers, and less than 0·5 on the outermost feathers: it is, moreover, a somewhat darker and more uniform bird, with much less buff markings on the upper parts, especially the wing-coverts.

Adult female. Only to be distinguished from the female of *D. obscurus* by having a narrower grey band across the tip of the tail.

Hab. Northern Rocky Mountains near Pacific coast, from California to Sitka.

a–c. ♂ ad. et ♂ ♀ imm. sk.	Vancouver Is.	J. K. Lord, Esq. [P.].
d, e. ♂ ♀ ad. sk.	Fort Klamath, Oregon, April, Aug. (*Capt. Bendire*).	Salvin-Godman Coll.
f. ♀ ad. sk.	Des Chutes River, Oregon, Aug. (*H. W. Henshaw*).	Salvin-Godman Coll.
g, h. ♂ ad. sk.	California.	Dr. A. Bartlett [P].
i. ♂ ad. sk.	Round Valley, Mend. Co., California, March (*H. W. Henshaw*).	Salvin-Godman Coll.
k. Pull. sk.	North Honey Lake, California, June (*H. W. Henshaw*).	Salvin-Godman Coll.

2. Dendragapus richardsoni.

Tetrao richardsonii, *Dougl. Trans. Linn. Soc.* xvi. p. 140 (1829) [W. side of Rocky Mts.]; *Wils. Illust. Zool.* pls. xxx., xxxi. (1831); *Lord, P. R. Art. Inst.* i. p. 122 (1863); *Baird, Ibis*, 1867, p. 271; *Gray, List Gallinæ Brit. Mus.* p. 86 (1867); *id. Hand-l.* ii. *B.* p. 276 (1870); *Coop. Calif. Orn.* i. p. 528 (1870).

Tetrao obscurus, *Swains. & Rich. (nec Say) F. Bor.-Amer.* ii. p. 344, pls. lix., lx. (1831); *Aud. Orn. Biog.* iv. p. 446, pl. ccclxi. (1838); *id. Syn.* p. 283 (1839); *Nutt. Man. Orn.* i. p. 609 (1840); *Aud. B. Amer.* v. p. 89, pl. ccxcv. (1842); *Blakist. Ibis*, 1862, p. 8 [Belly R.], & 1863, p. 121; *Lord, Brit. Columb.* ii. p. 164 (1866) [between Cascades and Rocky Mts.].

Dendragapus richardsonii, *Elliot, P. Ac. Philad.* 1864, p. 23; *id. Mon. Tetr.* pl. viii. (1865).

Canace obscurus, var. richardsoni, *Baird, Brew., & Ridgw.* iii. p. 427 (1874).

Tetrao obscurus richardsoni, *Coues, Bull. U.S. Geol. Surv.* iv. p. 629 (1878) [Rocky Mts., Lat. 49°]; *Williams, Bull. Nutt. Orn. C.* vii. p. 63 (1882) [Montana].

Canace obscura richardsoni, *Coues, Key*, p. 579 (1884).

Dendragapus obscurus richardsoni, *Ridgw. P. U.S. Nat. Mus.* viii. p. 355 (1885); *A. O. U. Check-l.* p. 171 (1886); *Ridgw. Man.* p. 196 (1887).

Adult male. Easily distinguished from *D. obscurus* and *D. fuliginosus* by having the tail uniform black, without any grey band across the extremity, though the tips of the feathers have narrow grey margins; the tail, moreover, is squarer, the outer feathers being slightly longer than those of the middle.

Adult female. Resembles the female of *D. obscurus*, but has no grey band across the tip of the tail, though the tips of the feathers are usually margined with grey.

Hab. Northern Rocky Mountains, from Central Montana northwards.

a–f. ♂ ♀ ad. et imm. sk. et st.	W. side Rocky Mts.	J. K. Lord, Esq. [P.].
g. ♂ ad. sk.	Fort Halkett, May.	B. R. Ross, Esq. [P.]

h. ♂ ad. sk.	Fort Halkett, April (*W. Bross*).	Salvin-Godman Coll.
i, k. ♂ imm. et ♀ ad. sk.	Fort Simpson, April.	B. R. Ross, Esq.
l, m. ♀ ad. sk.	Teton Cañon, Montana, July (*C. H. Merriam*).	Salvin-Godman Coll.
n. ♀ ad. sk.	Chief Mt. Lake, Montana, August (*E. Coues*).	Salvin-Godman Coll.
o. ♀ ad. sk.	Fort Dufferin, Aug.	N. Am. Boundary Comm. [P.].
p. ♀ imm. sk.	Hudson's Bay.	Hudson Bay Co. [P.].

7. TYMPANUCHUS.

	Type.
Tympanuchus, *Glog. Hand. u. Hilfsb.* p. 396 (1842)..	T. cupido.
Cupidonia, *Reich. Nat. Syst. Vög.* p. xxix (1852)	T. americanus.

Tail composed of 18 feathers, rather short and rounded; the outer feathers about two-thirds the length of the middle pair.

A tuft of elongate feathers and an inflatable air-sac on each side of the neck.

1st primary much shorter than the 2nd, and falls between the 6th and 7th; 3rd slightly longest.

Axillaries long and pure white.

Tarsi feathered, shorter than middle toe and claw.

Range. N. America.

Key to the Species.

A. Tufts of feathers on the sides of the neck very long, ca. 3 inches. (*Males.*)
  a. Longer feathers of neck-tuft lanceolate and pointed ..... *cupido*, p. 77.
  b. Longer feathers of neck-tuft parallel-edged, with rounded or truncate tips.
    a'. Feathers of chest brown, with subterminal band and tip white. Size larger: wing ca. 9 inches ..... *americanus*, p. 78.
    b'. Feathers of chest with about six alternate bars of brown and white. Size smaller: wing ca. 8·3 inches ..... *pallidicinctus*, p. 80.
B. Tufts of feathers on the sides of the neck much shorter. (*Females.*)

1. Tympanuchus cupido.

Urogallus minor, fuscus, &c., *Catesb.* ii. App. p. 1, pl. i. (1743).

Tetrao cupido, *Linn. S. N.* i. p. 274 (1766); *Gm. S. N.* i. pt. ii. p. 751 (1788); *Lath. Ind. Orn.* ii. p. 638 (1790); *Temm. Pig. et Gall.* iii. pp. 161, 703 (1815); *Vieill. Gal. Ois.* ii. p. 55, pl. 219 (1825); *Nutt. Man. Orn.* i. p. 662 (1832) [part., New Jersey, &c.].

Pinnated Grous, *Lath. Gen. Syn.* ii. pt. ii. p. 740 (1783); *Penn. Arct. Zool.* ii. p. 305 (1785); *Lath. Gen. Hist. B.* viii. p. 237 (1823).

Bonasa cupido, *Steph. in Shaw's Gen. Zool.* xi. p. 299 (1819) [New Jersey and Long Island].

Cupidonia cupido, *Baird, B. N. Am.* p. 628 (1860) [part.]; *Maynard,*

B. E. Mass. p. 138 (1870) [Martha's Vineyard and Naushon Isl.]; *id. B. E. N. Amer.* p. 350 (1881) [part.]; *Coues, Key*, p. 583 (1884) [part.]; *Brewst. Auk*, ii. p. 82 (1885) [Massachusetts].

Cupidonia cupido, var. cupido, *Baird, Brew., & Ridgw. N. Am. B.* iii. p. 440 (1874) [part.].

Tympanuchus cupido, *Ridgw. P. U.S. Nat. Mus.* viii. p. 355 (1885); *A. O. U. Check-l.* p. 175 (1886); *Ridgw. Man.* p. 203 (1887).

Cupidonia cupido brewsteri, *Coues, Key*, App. p. 884 (1887).

Adult male. Differs from *T. americanus* in having the neck-tufts of the male composed of not more than ten lanceolate pointed feathers.

Adult female resembles the female of *T. americanus*.

Hab. Island of Martha's Vineyard, Massachusetts. (Formerly Long Island, New Jersey, Eastern Pennsylvania.)

a, b. ♂ ♀ ad. sk. Martha's Vineyard, Mass., Jan. Purchased.

2. Tympanuchus americanus.

La Gelinote hupée d'Amérique, *Briss. Orn.* i. p. 212 (1760).

Tetrao cupido, *Wils.* (*nec Linn.*) *Am. Orn.* iii. p. 104, pl. 27. fig. 1 (1811) [Kentucky]; *Bonap. Tr. Am. Phil. Soc.* iii. p. 392 (1830) [Missouri and Oregon?]; *Nutt. Man. Orn.* i. p. 662 (1832) [part., Penusylvania?, Kentucky, &c.]; *Schinz, Nat. Abbild. Vög.* p. 277, pl. 105 (1833); *Aud. Orn. Biog.* ii. p. 490, pl. 186 (1834); *Koch, Wiegm. Arch. Nat.* 1836, p. 159; *Aud. Am. Orn.* v. p. 93, pl. 296 (1842); *Reich. Aves, Gallin.* pl. 217. figs. 1896-98 (1849); *Max. J. f. O.* 1858, p. 439; *Pelz. Ibis*, 1873, p. 120.

Cupidonia americana, *Reichenb. Nat. Syst. Vög.* p. xxix (1852); *Bonap. C. R.* xlv. p. 428 (1857).

Cupidonia cupido, *Baird, B. N. Am.* p. 628 (1860) [part.]; *Fitz. Atl. Nat. Vög.* fig. 244 (1864); *Elliot, P. Ac. Philad.* 1864, p. 23; *id. Mon. Tetr.* pl. xvi. (1865); *Dress. Ibis*, 1865, p. 315, & 1866, p. 26 [Texas]; *Snow, B. Kansas* ed. 3, p. 11 (1875); *Rob. & Benn. Nutt. Orn. C.* v. p. 18 (1880) [Minnesota]; *Mayn. B. E. N. Amer.* p. 350 (1881) [part.]; *Brewst. Nutt. Orn. C.* vii. p. 59 (1882) [Variety from Iowa]; *Nehrl. Nutt. Orn. C.* vii. p. 175 (1882) [Texas]; *Coues, Key*, p. 583 (1884) [part.]; *Drew, Auk*, ii. p. 17 (1885) [Colorado]; *Nehrl. J. f. O.* 1885, p. 142 [Illinois]; *Agersb. Auk*, ii. p. 285 (1885) [Dakota]; *Smith, Auk*, iii. p. 139 (1886) [Columbia].

Bonasa cupido, *Gray, List B.* pt. v. *Gall.* p. 88 (1867); *id. Hand-l. B.* ii. p. 277 (1870); *Meyer, Vog.-Skel.* pl. cxxvii. (1888-89).

Cupidonia cupido, var. cupido, *Baird, Brew., & Ridgw. N. Am. B.* iii. p. 440 (1874) [part.].

Cupidonia pinnata, *Brewst. Auk*, ii. p. 82 (1885) [from Illinois westward].

Tympanuchus pinnatus, *Ridgw. P. U.S. Nat. Mus.* viii. p. 355 (1885).

Tympanuchus americanus, *Ridgw. Auk*, iii. p. 132 (1886); *A. O. U. Check-l.* p. 175 (1886); *Seton, Auk*, iii. p. 153 (1886) [W. Manitoba]; *Ridgw. Man.* p. 203 (1887); *Eversm. Auk*, v. p. 349 (1888) [Indiana]; *Thompson, P. U.S. Nat. Mus.* xiii. p. 514 (1891) [Manitoba].

Adult male. General colour above brown, barred and marked with buff and black; the feathers on the crown mostly dark brown tipped with white and somewhat elongate, forming a short crest; those on the back of the neck, wing-coverts, scapulars, and secondaries tipped with whitish buff; the neck-tufts composed of more than ten feathers, the longer ones are black, the middle and lesser ones creamy white down the middle and margined on their inner webs with pale chestnut; quills pale brown, all (except sometimes the innermost primaries) toothed or barred with buff; lores and space in front of the eye, patch above the ear-coverts, chin, and throat whitish buff; a dark brown band from the angle of the gape to the ear-coverts and a patch of spots of the some colour on the sides of the throat; feathers on fore part of neck dark brown, barred with light red, and mostly with white shafts and tips; rest of the underparts paler brown, barred and fringed with white; axillaries long, and pure white like the vent; thighs brownish white; under tail-coverts brownish black, mottled and very widely tipped with white; tail brownish black, narrowly tipped with white, the middle feathers mottled and irregularly barred towards the margins of the webs. Total length 16·5 inches, wing 9, tail 3·9, tarsus 1·9.

Adult female. Differs from the male in having the neck-tufts much reduced in length and the outer as well as the middle tail-feathers barred with rufous buff. The measurements are usually also a trifle less.

In *young specimens* the general colour is brown, blotched with black, and barred and mottled with buff; the top of the head is chestnut, with a black patch in the middle; the feathers of the mantle, wing-coverts, scapulars, outer secondaries, and tail with strongly marked whitish-buff shaft-stripes; chin, throat, and underparts white, the latter barred with dark brown and washed with buff or pale rufous on the sides.

Hab. Prairies of Mississippi Valley, south to Louisiana and Texas, west to the middle of Kansas, Nebraska, and Dakota, north to Manitoba and Wisconsin, east to Indiana and Kentucky.

a, *b*. ♂ ♀ ad. st.; *c*, *d*. ♂ ad. et ♀ juv. sk.	North America.	Purchased.
e. ♂ ad. sk.	New York Market, Feb. (*H. W. Henshaw*).	Salvin-Godman Coll.
f. ♂ imm. sk.	Illinois (*J. H. Batty*).	Salvin-Godman Coll.
g. Juv. sk.	Rockford, Illinois (*J. Blackman*).	Salvin-Godman Coll.
h. ♂ juv. sk.	Fox Prairie, Richland Co., Illinois, August (*E. W. Nelson*).	Salvin-Godman Coll.
i. ♀ imm. sk.	Iowa, Dec. (*E. Coues*).	Salvin-Godman Coll.
k, *l*. Pull. sk.	Moody Co., Dakota, June (*F. J. Jencks*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Ivan Pap, Kansas, Jan. (*Brown*).	Salvin-Godman Coll.
n. Skeleton.		

Hybrid between Tympanuchus americanus *and* Pediocætes columbianus.

Cupidonia cupidini-columbiana, *Brewst. Bull. Nutt. Orn. C.* ii. p. 66 (1877).

Pediœcetes phasianellus × Cupidonia cupido, *Gurney, Auk*, i. p. 391 (1884).

a. ♂ ad. sk. North America. Purchased.

3. Tympanuchus pallidicinctus.

Cupidonia cupido, var. pallidicinctus, *Ridgw., in Baird, Brew., & Ridgw. N. Am. B.* iii. p. 446 (1874) [Texas]; *Lawr. Bull. Nutt. Orn. C.* ii. p. 52 (1877) [S. Missouri]; *Merrill, P. U.S. Nat. Mus.* i. p. 159 (1878) [S. Texas].

Cupidonia cupido pallidicincta, *Coues, Key*, p. 584 (1884).

Tympanuchus pallidicinctus, *Ridgw. P. U.S. Nat. Mus.* viii. p. 355 (1885); *A. O. U. Check-l.* p. 175 (1886); *Lloyd, Auk*, iv. p. 187 (1887) [W. Texas]; *Ridgw. Man.* p. 203 (1887).

Adult male. Resembles the male of *T. americanus*, but is smaller and easily distinguished by having the darker subterminal bars on the back treble, *i. e.* composed of a wider brown band in the middle and two narrower black bands on each side, whereas in the latter bird they are uniform black or have at most only a spot of brown on the margin of each web; the feathers of the chest have about six alternate bars of brown and white and the bars are also much narrower. Total length 15 inches, wing 8·3, tail 3·5, tarsus 1·6.

Adult female. Differs from the male in having the neck-tufts much shorter and the longest feathers buff barred with black; all the tail-feathers are barred with buff.

Hab. Eastern border of Great Plains from Nebraska (?), S.W. Kansas, S.W. Missouri (?), and western part of Indian Territory to W. Texas.

a, *b*. ♂ ♀ ad. sk.	Kansas (*D. G. Elliot*).	Salvin-Godman Coll.
c, *d*. ♂ ♀ ad. sk.	Kansas, Feb. (*G. N. Lawrence*).	Salvin-Godman Coll.

8. CENTROCERCUS.

	Type.
Centrocercus, *Swains. Faun. Bor.-Amer.* ii. pp. 342, 496 (1831)	C. urophasianus.

Tail composed of 20 feathers, elongate, wedge-shaped, and pointed, the outer pair more than half the length of the middle pair.

An inflatable air-sac on each side of the neck.

1st primary much shorter than the 2nd, and falls between the 6th and 7th; 4th rather longest.

Axillaries long and white.

Tarsi shorter than middle toe and claw.

Range. N. America.

1. Centrocercus urophasianus.

Cock of the Plains, *Lewis & Clark*, ii. p. 180, sp. 2.

Tetrao urophasianus, *Bonap. Zool. J.* iii. p. 213 (1828) [Missouri]; *id. Am. Orn.* iii. p. 55, pl. xxi. fig. 1 (1828); *Dougl. Tr. Linn. Soc.* xvi. p. 133 (1829); *Bonap. Tr. Am. Phil. Soc.* iii. p. 390 (1830); *Wils. Ill. Zool.* pls. xxvi., xxvii. (1831); *Nutt. Man. Orn.* i. p. 665 (1832); *Aud. Orn. Biog.* iv. p. 503, pl. 371 (1838); *id. B. Amer.* v. p. 106, pl. 297 (1842); *Newb. Rep. P. R. R. Surv.* vi. pt. iv. p. 95 (1857); *Neuwied, J. f. O.* 1858, p. 431; *Cass. U.S. Expl. Exp.* p. 285 (1858) [Walla-Walla]; *Gray, Hand-l. B.* ii. p. 276 (1870).

Tetrao (Centrocercus) urophasianus, *Swains. & Richards. Faun. Bor.-Amer.* ii. p. 358, pl. 58 (1831).

Centrocercus urophasianus, *Jard. Nat. Libr., Orn.* iv. p. 140, pl. xvii. (1834); *Gray, List of B.* pt. iii. *Gall.* p. 46 (1844); *Baird, B. N. Am.* p. 624 (1860); *Coop. & Suckl. Rep. Expl. Miss. Riv.* xii. no. 3, p. 222 (1860); *Elliot, P. Ac. Philad.* 1864, p. 23; *id. Mon. Tetr.* pl. xiii. (1865); *Coues, Ibis*, 1866, p. 265 [Soda Lake, S. California]; *Gray, List Gallinæ Brit. Mus.* p. 87 (1867); *Coop. Calif. Orn.* i. p. 536 (1870); *Baird, Brew., & Ridgw. N. Am. B.* iii. p. 429 (1874); *Coues, Bull. U. S. Geol. Surv.* iv. p. 629 (1878) [Montana]; *Scott, Nutt. Orn. C.* iv. p. 96 (1879) [Colorado]; *Mearns, Nutt. Orn. C.* iv. p. 197 (1879) [Ft. Klamath]; *Coues, Key*, p. 580 (1884); *Drew, Auk*, ii. p. 17 (1885) [Colorado]; *A. O. U. Check-l.* p. 176 (1886); *Ridgw. Man.* p. 205 (1887); *Townsend, P. U. S. Nat. Mus.* x. pp. 200, 235 (1887) [N. California].

Sage Cock, *Elliot, Mon. Tetr.* pl. xiii. (1865).

Adult male. General colour above black, very irregularly barred, mottled, and marked with sandy grey, buff, and rufous, some of the feathers, especially the wing-coverts, scapulars, and secondaries, irregularly barred with white and the former with white shaft-stripes; quills and primary-coverts brown, the secondaries margined at the tip with white and mottled on the outer web with buff; sides of the head, chin, and throat spotted with black and white, in some specimens the former, in some the latter colour predominating; a white crescent on the front of the neck, followed by a large black patch; a lateral ruff of elongate white feathers on each side of the neck, the shafts produced into long recurved processes bearing black filaments; chest white, the feathers short and scale-like, with sharp-pointed shafts; breast similar, but the tips of the shafts are produced beyond the web into black bristles; belly black, whitish on the sides; sides and flanks mottled with black, brown, and buff, and with whitish shaft-stripes; under tail-coverts black, largely tipped with white. Tail dark brown, the basal two-thirds of the feathers mottled with rufous and irregularly barred with buff. Total length 28 inches, wing 12·5, tail 12, tarsus 2·2.

Specimens after the summer moult are much more brightly coloured; and most of the markings on the new feathers of the upper parts are warm rufous buff instead of sandy whitish buff as in the old ones.

Adult female. Differs from the male chiefly in having the chin and throat white, and the fore part of the neck spotted with

brownish black. Total length 22 inches, wing 10·8, tail 6·5, tarsus 1·9.

Immature birds resemble the female in appearance, but the general colour of the upper parts has less black intermixed and the markings on the breast are coarser and less regular.

Hab. "Sage-brush" plains of the Rocky Mountain plateau, north into British America, south to New Mexico, South California, Utah, and Nevada.

a. ♀ ad. sk.	Rocky Mountains.	Hudson Bay Co.]P.].
b. ♂ ad. sk.	Fort Dufferin, July.	N. Amer. Boundary Commission [P.].
c. ♂ imm. sk.	Middle Fork, Snake R., Idaho Terr., July (*C. H. Merriam*).	Salvin-Godman Coll.
d. ♀ ad. sk.	Laramie River, Wyoming, Aug. (*E. Coues*).	Salvin-Godman Coll.
e. ♂ imm. sk.	Clear Fork, Nebraska, Sept. (*F. V. Hayden*).	Salvin-Godman Coll.
f,g. ♂ ad. et ♀ imm. st.	Rocky Mountains, California.	Dr. A. Barclay [P.].

9. PEDIOCÆTES.

Type.

Pediocætes, *Baird, Rep. Expl. and Surv.* ix. pt. 2, *Zool.* p. 625 (1858) ..... P. phasianellus.

Tail composed of 18 feathers, wedge-shaped, rather long; the middle pair more than twice as long as the outer pair.

1st primary shorter than 2nd, intermediate in length between 6th and 7th; 4th rather the longest.

Axillaries long and white.

Tarsus shorter than middle toe and claw.

Range. N. America.

Key to the Species.

A. General colour above dark, the black on the upper parts predominating over the rufous, buff, and white markings; feathers of the chest black, with a white heart-shaped patch in the middle and a white fringe round the margin.. *phasianellus*, p. 82.

B. General colour above light, the rufous, buff, and white markings on the upper parts predominating over the black; feathers of the chest white, each feather with a concentric submarginal black band ..... *columbianus*, p. 83.

1. Pediocætes phasianellus.

Long-tailed Grous from Hudson's Bay, *Edw. Nat. Hist. B.* pt. iii. p. 117, pl. (1750).

Tetrao urogallus β, *Linn. S. N.* i. p. 273 (1766).

Tetrao phasianellus, *Linn. S. N.* i. p. 273 (1766); *Forst. Phil. Trans.* lxii. pp. 394, 495 (1772); *Gm. S. N.* i. pt. ii. p. 747 (1788); *Lath. Ind. Orn.* ii. p. 635 (1790); *Temm. Pig. et Gall.* iii. pp. 152, 701 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 284 (1819); *Sabine*,

Frankl. Exp. i. App. p. 680 (1823); *Murray, Pr. Phys. Soc. Edinb.* ii. p. 49 (1859) [Troutlake Station]; *Gray, Hand-l. B.* ii. p. 276 (1870).

Long-tailed Grous, *Lath. Gen. Syn.* ii. pt. ii. p. 732 (1783), *Suppl.* i. p. 212 (1787).

Sharp-tailed Grous, *Penn. Arct. Zool.* ii. p. 306 (1785), & i. p. 357 (1792).

Centrocercus phasianellus, *Gray, List of B.* pt. iii. *Gall.* p. 46 (1844); *id. List Gallinæ Brit. Mus.* p. 87 (1867).

Pediocœtes kennicotti, *Suckl. P. Ac. Philad.* 1861, pp. 334, 361 [Fort Rae & Big Island].

Pediocætes phasianellus, *Elliot, P. Ac. Philad.* 1862, p. 403; *A. O. U. Check-l.* p. 176 (1886); *Ridgw. Man.* p. 204 (1887); *Thompson, P. U. S. Nat. Mus.* xiii. p. 516 (1891) [Manitoba].

Pediœcetes phasianellus, *Blakiston, Ibis*, 1862, p. 8 [Forks of the Saskatchewan], & 1863, p. 124; *Dall & Bann. Tr. Chicago Ac.* i. p. 287 (1869) [Nulato to Fort Yukon]; *Pelz. Ibis*, 1873, p. 37; *Coues, Key*, p. 581 (1884).

Pediæcætes phasianellus, *Elliot, Mon. Tetr.* pl. xv. (1865).

Pediœcetes phasianellus, var. phasianellus, *Baird, Brew., & Ridgw. N. Am. B.* iii. p. 434 (1874).

Adult male and female. Much darker and rather larger than *P. columbianus*; the black on the upper parts predominates over the rufous, buff, and white markings, the latter being especially conspicuous on the wing-coverts and scapulars; the feathers of the chest black, with a white heart-shaped patch in the middle and a white fringe round the margin, while on the rest of the underparts the black markings are much stronger and the feathers on the tarsi are longer. Total length 16·8 inches, wing 8·4, tail 4·6, tarsus 1·5.

Hab. Interior of British America, north to Fort Simpson, south to Lake Winnipeg and the north shore of Lake Superior, east to Hudson Bay, and west to the Rocky Mountains.

a, b. ♀ ad. sk. et st.	Fort Simpson.	B. R. Ross, Esq. [P.].
c. ♀ ad. sk.	Fort Resolution, May (*L. Clark*).	Salvin-Godman Coll.
d. ♀ ad. st.	Repulse Bay.	Dr. J. Rae [P.].
e. ♂ ad. sk.	Northern Land Expedition.	Admiral Sir G. Back [P.].

Subsp. α. Pediocætes columbianus.

Phasianus columbianus, *Ord, Guthrie's Geog.* (2nd Amer. ed.) ii. p. 317 (1815).

Tetrao phasianellus, *Ord* (*nec Linn.*), *Guthrie's Geog.* (2nd Amer. ed.) ii. p. 317 (1815); *Bonap. Am. Orn.* iii. pl. xix. (1828); *Nutt. Man. Orn.* i. p. 669 (1832); *Aud. Orn. Biog.* iv. p. 569, pl. 382 (1838); *id. B. Amer.* v. p. 110, pl. 298 (1842); *Newb. Rep. P. R. R. Surv.* vi. pt. iv. p. 94 (1857); *Cass. U.S. Expl. Exped.* p. 284 (1858) [Oregon].

Tetrao urophasianellus, *Dougl. Tr. Linn. Soc.* xvi. p. 136 (1829) [R. Columbia & N. California].

Centrocercus phasianellus, *Jard. Nat. Libr., Orn.* iv. p. 136, pl. xvi. (1834).

Pediœcetes phasianellus, *Neuwied, J. f. O.* 1858, p. 435.
Pediocætes phasianellus, *Baird, B. N. Amer.* p. 626 (1860); *Coop. & Suckl. Rep. Expl. Miss. Riv.* xii. no. 3, p. 223 (1860).
Pediocætes columbianus, *Elliot, P. Ac. Philad.* 1862, p. 403.
Pediœcetes urophasianellus, *Blakist. Ibis*, 1863, p. 127.
Pediæcætes columbianus, *Elliot, Mon. Tetr.* pl. xiv. (1865).
Centrocercus columbianus, *Gray, List Gallinæ Brit. Mus.* p. 88 (1867).
Pediœcetes columbianus, *Coop. Calif. Orn.* i. p. 532 (1870).
Tetrao columbianus, *Gray, Hand-l. B.* ii. p. 276 (1870).
Pediœcetes phasianellus, var. columbianus, *Baird, Brew., & Ridgw.* iii. p. 436 (1874).
Pediœcetes phasianellus columbianus, *Coues, Bull. U.S. Geol. Surv.* iv. p. 630 (1878) [Dakota; Montana]; *Mearns, Bull. Nutt. Orn. C.* iv. p. 117 (1879) [Ft. Klamath]; *Rob. & Benn. Bull. Nutt. Orn. C.* v. p. 17 (1880) [Minnesota]; *Brewst. Bull. Nutt. Orn. C.* vii. pp. 227, 233 (1882) [Washington Terr.]; *Coues, Key*, p. 581 (1884); *Nehrl. J. f. O.* 1885, p. 143 [Illinois]; *Drew, Auk*, ii. p. 17 (1885) [Colorado]; *Agersb. Auk*, ii. p. 285 (1885) [Dakota]; *Seton, Auk*, iii. p. 153 (1886) [W. Manitoba]; *Merrill, Auk*, v. p. 145 (1888) [Oregon].
Pediœcetes phasianellus campestris, *Ridgw. P. Biol. Soc. Wash.* ii. p. 93 (1884) [Montana].
Pediocætes phasianellus columbianus, *A. O. U. Check-l.* p. 176 (1886); *Ridgw. Man.* p. 204 (1887); *Townsend, P. U.S. Nat. Mus.* x. pp. 200, 235 (1887) [N. California].
Pediocætes phasianellus campestris, *A. O. U. Check-l.* p. 176 (1886); *Ridgw. Man.* p. 204 (1887); *Thompson, P. U.S. Nat. Mus.* xiii. p. 516 (1891) [S. & W. Manitoba].

Adult male. General colour above sandy grey or greyish clay-colour, mottled and irregularly barred and blotched with black and spotted with white, especially towards the base of the feathers of the interscapulary region; wing-coverts, scapulars, and outer secondaries white, spotted at the extremity; quills light brown; rest of the secondaries barred and tipped with white; all the primaries spotted on the outer web with white and the inner ones tipped with the same colour; lores, superciliary stripes, cheeks, chin, and throat pale buff; cheeks and sometimes the throat spotted with black; neck buff, barred and mottled with black; chest, breast, and sides of belly white, each feather with a concentric submarginal black band; sides and flanks like the scapulars: middle of belly and vent white; tarsi smoky white; under tail-coverts mottled with black and sandy grey, and barred, mottled, and widely tipped with white; two middle pairs of tail-feathers barred and marked with rufous buff and black and tipped with white; rest of outer feathers mostly white, with the basal part of the outer web mottled with black. Total length 15 inches, wing 8·1, tail 5, tarsus 1·7.

Adult female. Resembles the male, but the tail is a trifle shorter and the size somewhat less: generally, too, the barring on the back of the neck and upper mantle is stronger and more regular. Total length 14·8 inches, wing 7·7, tail 4·5.

Hab. United States—north to Manitoba, east to Wisconsin and Northern Illinois, south to New Mexico, and west from Northern California west of the Rocky Mountains to Fort Yukon, Alaska.

a. Imm. sk.	Canada.	Government of Canada [P.].
b. Ad. sk.	Hudson's Bay.	Hudson Bay Co. [P.].
c–f. ♀ ad. et imm. sk.	Fort Dufferin.	N. American Boundary Commission [P.].
g. ♂ ad. sk.	North Minnesota, Dec. (*E. W. Nelson*).	Salvin-Godman Coll.
h. ♀ ad. sk.	Atkinson, Nebraska, Jan.	G. F. Morcom, Esq. [P.].
i. Pull. sk.	Portneuf Cañon, Idaho Territory, Feb. (*C. H. Merriam*).	Salvin-Godman Coll.
k. Imm. sk.	Salt Lake, Utah, Dec. (*E. W. Nelson*).	Salvin-Godman Coll.
l. ♀ imm. sk.	Fort Crook, N. California (*J. Feilner*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Oak Grove, Oregon, Sept. (*H. W. Henshaw*).	Salvin-Godman Coll.
n. ♀ imm. sk.	Fort Klamath, Oregon, Jan. (*C. Bendire*).	Salvin-Godman Coll.
o–r. ♀ ad. et imm. sk.	Walla-Walla, Washington Territory, Oct., Nov. (*H. W. Henshaw*).	Salvin-Godman Coll.
s–v. Ad. sk. et st.	West side of Rocky Mountains, British Columbia.	J. K. Lord, Esq. [P.].

10. BONASA.

	Type.
Bonasa, *Steph. in Shaw's Gen. Zool.* xi. p. 298 (1819) ..	B. umbellus.
Bonasia, *Bonap. Tr. Am. Phil. Soc.* iii. p. 389 (1830); *id. Comp. List B. Eur.* p. 48 (1838)	B. umbellus.

Sexes similar.

Tail composed of 18 feathers, rather long, bluntly wedge-shaped, the outermost pair being nearly as long as the middle pair.

1st primary much shorter than the 2nd, and falls between the 7th and 8th; 4th slightly the longest.

A frilled ruffle of fan-shaped feathers on each side of the neck.

Tarsus half-feathered, shorter than middle toe and claw.

A short crest. Axillaries fairly long, barred black and white.

Range. N. America; ranging north to Alaska and Labrador, and south to North California and South Carolina.

1. Bonasa umbellus.

Pheasant of Pennsylvania, *Edwards, Phil. Trans.* xlviii. p. 499, pl. 15 (1754).

Ruffed Heath-cock or Grous, *Edw. Glean.* v. p. 79, pl. 248 (1758).

La Grosse Gelinote de Canada, *Briss. Orn.* i. p. 207, pl. xxi. fig. 1 (1760); *D'Aubent. Pl. Enl.* no. 104.

La Gelinote huppée de Pensilvanie, *Briss. Orn.* i. p. 214 (1760).

Tetrao umbellus, *Linn. S. N.* i. p. 275 (1766) [Pennsylvania]; *Gm. S. N.* i. pt. ii. p. 752 (1788); *Lath. Ind. Orn.* ii. p. 638 (1790); *Wils. Am. Orn.* vi. p. 45, pl. 49 (1812); *Temm. Pig. et Gall.* iii. pp. 165, 704 (1815); *Doughty, Cab. N. H.* i. p. 13, pl. ii. (1830);

Sw. & Rich. Faun. Bor.-Am. ii. p. 342 (1831); *Aud. Orn. Biog.* i. p. 211, pl. 41 (1831), v. p. 560 (1839); *Jard. Nat. Lib., Orn.* iv. p. 127, pl xiv. (1834); *Aud. B. Am.* v. p. 73, pl. 293 (1842); *Newb. Rep. P. R. R. Surv.* vi. pt. iv. p. 94 (1857); *Cass. U.S. Expl. Exped.* p. 283 (1858).

Tetrao togatus, *Linn. S. N.* i. p. 275 (1766) [Canada]; *Forst. Phil. Trans.* lxii. p. 393 (1772); *Gm. S. N.* i. pt. ii. p. 752 (1788).

Ruffed Grous, *Lath. Gen. Syn.* ii. pt. ii. p. 738 (1783); *Suppl.* i. p. 215 (1787); *Penn. Arct. Zool.* ii. p. 301 (1785); *id. Gen. Hist. B.* viii. p. 234 (1823).

Shoulder-knot Grous, *Lath. Gen. Syn.* ii. pt. ii. p. 737 (1783).

Tetrao tympanus, *Bartr. Trav. Florida,* p. 288 (1792) [Pennsylvania].

Bonasa umbellus, *Steph. in Shaw's Gen. Zool.* xi. p. 300 (1819); *Gray, List of B.* pt. iii. *Gall.* p. 46 (1844); *Baird, B. N. Am.* p. 630 (1860); *Elliot, P. Ac. Philad.* 1864, p. 23; *id. Mon. Tetr.* pl. i. (1865); *Gray, List Gallinæ Brit. Mus.* p. 89 (1867); *Dall & Bann. Tr. Chicago Ac.* i. p. 287 (1869) [Nulato, Alaska]; *Gray, Hand-l. B.* ii. p. 277 (1870); *Snow, B. Kansas,* ed. 3, p. 11 (1875); *Merr. Tr. Connect. Ac.* iv. p. 100 (1877) [Connecticut]; *Merr. Nutt. Orn. C.* vi. p. 233 (1881) [N. York]; *Mayn. B. E. N. Amer.* p. 351 (1881); *Beckh. J. Cinc. Soc.* vi. p. 145 (1883) [Kentucky]; *Nehrl. J. f. O.* 1885, p. 142 [Illinois]; *Brewst. Auk,* iii. p. 102 (1886) [N. Carolina]; *Fox, Auk,* iii. p. 319 (1886) [Tennessee]; *Loomis, Auk,* iii. p. 483 (1886) [S. Carolina]; *Turner, P.U.S. Nat. Mus.* viii. p. 245 (1886) [Labrador]; *A. O.U. Check-l.* p. 172 (1886); *Chadb. Auk,* iv. p. 103 (1887) [N. Hampshire]; *Langdon, Auk,* iv. p. 129 (1887) [Tennessee]; *Ridgw. Man.* p. 197 (1887); *Richm. Auk,* v. p. 20 (1888) [Columbia]; *Faxon & Allen, Auk,* v. pp. 149, 151, 153 (1888) [N. Hampshire]; *Everm. Auk,* v. p. 349 (1888) [Indiana]; *Brewst. Auk,* v. p. 389 (1888) [Massachusetts]; *Faxon, Auk,* vi. pp. 44, 99 (1889) [Massachusetts]; *Rives, Auk,* vi. p. 52 (1889) [Virginia]; *Loomis, Auk,* vii. p. 36 (1890), viii. p. 326 (1891) [S. Carolina].

Tetrao umbelloides, *Dougl. Tr. Linn. Soc.* xvi. p. 148 (1829) [54° N. lat., source of Peace R.].

Tetrao (Bonasia) umbellus, *Bonap. Tr. Am. Phil. Soc.* iii. p. 389 (1830); *Nutt. Man. Orn.* i. p. 657 (1832).

Tetrao sabinii, *Dougl. Tr. Linn. Soc.* xvi. p. 137 (1829) [N.W. America, Straits of Cape Mendocina to Vancouver Is.]; *Baird, Ibis,* 1867, p. 271.

Bonasa umbellus, var. umbelloides, *Baird, B. N. Am.* p. 925 (1860); *Baird, Brew., & Ridgw. N. Am. B.* iii. p. 453 (1874).

Bonasa sabinii, *Baird, B. N. Am.* p. 631 (1860); *Coop. & Suckl. Rep. Expl. Miss. Riv.* xii. no. 3, p. 224 (1860); *Lord, Pr. R. Art. Inst.* iv. p. 123 (1864); *Elliot, P. Ac. Philad.* 1864, p. 23; *id. Mon. Tetr.* pl. iii. (1865); *Gray, List Gallinæ Brit. Mus.* p. 89 (1867); *Dall & Bann. Tr. Chicago Ac.* i. p. 287 (1869) [Sitka & British Columbia]; *Gray, Hand-l. B.* ii. p. 277 (1870); *Coop. Calif. Orn.* i. p. 540 (1870); *Coues, Key,* p. 585 (1884); *Touns. Auk,* iii. p. 491 (1886) [N. California].

Bonasia umbellus, *Blakist. Ibis,* 1863, p. 127 [Forks of the Saskatchewan to Hudson Bay].

Bonasa umbelloides, *Elliot, P. Ac. Philad.* 1864, p. 23; *id. Mon. Tetr.* pl. ii. (1865).

Bonasia sabinii, *Brown, Ibis,* 1868, p. 424 [Vancouver Is.].

Bonasa jobsii, *Jaycox, Cornell Era,* Dec. 8, 1871, & Jan. 19, 1872; *Ibis,* 1872, pp. 191, 439.

Bonasa umbellus, var. umbellus, *Baird, Brew., & Ridgw. N. Am. B.* iii. p. 448 (1874).

Bonasa umbellus, var. sabini, *Baird, Brew., & Ridgw.* iii. p. 454 (1874).

Bonasa umbellus umbelloides, *Mearns, Bull. Nutt. Orn. C.* iv. p. 197 (1879) [Ft. Klamath]; *Williams, Bull. Nutt. Orn. C.* vii. p. 63 (1882) [Montana]; *Seton, Auk,* ii. p. 270 (1885), iii. p. 153 (1886) [Manitoba]; *Turner, Contr. N. H. Alaska,* p. 152 (1886) [Yukon Valley]; *A. O. U. Check-l.* p. 172 (1886); *Ridgw. Man.* p. 198 (1887); *Thompson, P. U.S. Nat. Mus.* xiii. p. 509 (1891) [W. & S. Manitoba].

Bonasa umbella, *Merr. Bull. Nutt. Orn. C.* vii. p. 238 (1882) [Canada]; *Coues, Key,* p. 585 (1884).

Bonasa umbellus sabini, *Brewst. Bull. Nutt. Orn. C.* vii. pp. 227, 232 (1882) [Washington Terr.]; *Anth. Auk,* iii. p. 164 (1886) [Oregon]; *A. O. U. Check-l.* p. 173 (1886); *Townsend, P. U.S. Nat. Mus.* x. pp. 200, 235 (1887) [N. California]; *Ridgw. Man.* p. 198 (1887); *Merrill, Auk,* v. p. 145 (1888) [Oregon].

Bonasa umbella umbelloides, *Coues, Key,* p. 585 (1884); *Drew, Auk,* ii. p. 17 (1885) [Colorado].

Bonasa umbellus togata, *Ridgw. P. U.S. Nat. Mus.* viii. p. 355 (1885); *A. O. U. Check-l.* p. 172 (1886); *Ridgw. Man.* p. 198 (1887); *Dwight, Auk,* iv. p. 16 (1887) [Cape Breton Is.]; *Britt. & Cox, Auk,* vi. p. 117 (1889) [N. Brunswick]; *Thompson, P. U.S. Nat. Mus.* xiii. p. 508 (1891) [E. Manitoba].*

Adult male. General colour above rufous or grey, but every intermediate stage of coloration between the two can be found; top of the head barred with black; feathers of the short crest mostly black, those of the mantle mostly tipped and mixed with buff and barred and marked with black; the frilled ruffles on the sides of the neck black more or less glossed with green at the tips, in some specimens, however, they vary to dull chestnut; feathers of the interscapular region, lower back, rump, and upper tail-coverts finely vermiculated with black, and with pale buff, subterminal, heart-shaped or oval spots irregularly edged with black; wing-coverts and scapulars somewhat similar, but the buff markings take the form of a mesial streak and the latter usually have the inner web blotched with black; quills brown, the outer webs of the middle primaries mostly buff barred with brown; the secondaries narrowly margined with dirty white and more or less mottled with rufous or sandy along the margin of the outer web; ear-coverts elongate, with whitish shafts and tips; chin and throat and a small patch before and behind the eye buff, most of the feathers on the

* This species is subject to great climatic variation and, as is the case with many other birds, such as *Turnix taigoor*, has two well-marked phases of plumage, a grey and a rufous. These phases intergrade and every intermediate shade between the two can be found. The various varieties have been catalogued under no less than four different names, either as species or subspecies, by the latest American authors; but as all these varieties are to be found among a series of specimens from New York alone and are therefore not even dependent on locality, we consider it needless to employ more than one name for all, especially as the four recognized forms grade imperceptibly into one another.

sides of the throat edged with brown, those of the fore part of the neck dark brown tipped with white; breast buff or rufous buff, with a subterminal brown bar and white tip to each feather (the colour of this bar varies much in different individuals, even from the same locality, and is sometimes exceedingly faint, at others strongly marked and edged with lines of a deeper colour); sides like the wing-coverts; flanks and belly widely tipped with white, and with dark brown or blackish subterminal bands; vent white; under tail-coverts orange-buff or grey, more or less mottled with dusky and tipped with white. Tail-feathers rufous, sandy, or grey, or a mixture of all three, barred and mottled with black and with a wide subterminal black band edged on either side with grey; in some specimens, usually those with chestnut ruffles, the subterminal band is dull chestnut or brownish, in others it is interrupted or indistinctly defined: these are apparently purely individual characters and are due neither to age nor sex. Total length 17 inches, wing 7·3, tail 6·5, tarsus 1·6.

Adult female. Similar to the male but rather smaller and with the ruffles usually less developed.

Young birds differ chiefly from the adults in having the outer secondaries, scapulars, and tail-feathers rufous brown, with rather widely placed bars of buff, edged and mottled with dusky; chin and throat white.

Hab. Same as that of the genus.

a, b. ♂ ♀ imm. sk.	Vancouver Is., Nov., Dec. (*A. Forrer*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Nulato, Alaska, Feb. (*E. W. Nelson*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Anoik, Alaska, March (*E. W. Nelson*).	Salvin-Godman Coll.
e, f. ♂ ♀ ad. sk.	Fort Simpson, March.	B. R. Ross, Esq. [P.].
g, h. ♂ ad. et imm. sk. et st.	Canada.	Mrs. Mauger [P.].
i. ♂ imm. sk.	Canada.	Govt. of Canada [P.].
k, l. ♂ ad. sk.	Fort Dufferin.	N. Amer. Boundary Commission [P.].
m. ♂ imm. sk.	Hudson's Bay.	Hudson's Bay Co.
n. ♀ ad. sk.	Calais, Maine (*G. A. Boardman*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Massachusetts (*H. W. Henshaw*).	Salvin-Godman Coll.
p. ♀ ad. sk.	Grantville, Massachusetts, March (*H. W. Henshaw*).	Salvin-Godman Coll.
q, r. ♂ ♀ imm. sk.	Wellesley, Mass., Oct. (*H. W. Henshaw*).	Salvin-Godman Coll
s, t. ♂ ad. et imm. sk.	Wellesley Hills, Mass., Oct. (*H. W. Henshaw*).	Salvin-Godman Coll.
u. ♀ pull. sk.	Concord, Mass., June (*H. W. Henshaw*).	Salvin-Godman Coll.
v. Pull. sk.	E. Hampton, Mass., June (*C. H. Merriam*).	Salvin-Godman Coll.
w. ♀ ad. sk.	Granville, Washington Co., New York (*J. A. Hurst*).	Tweeddale Coll.

x. Juv. sk.	Leyden, New York, Aug. (*C. H. Merriam*).	Salvin-Godman Coll.
y. ♀ ad. sk.	Locust Grove, New York, Jan. (*C. H. Merriam*).	Salvin-Godman Coll.
z–*l'*. ♂ ♀ ad., imm., & pull. sk.	Lyons Fall, New York, Jan., Feb., May, June, Oct., Dec. (*A. J. Dayan*).	Salvin-Godman Coll.
m'. Juv. sk.	Moose River, Louis Co., New York, July (*C. H. Merriam*).	Salvin-Godman Coll.
n'. ♂ imm. sk.	Washington, D.C., Nov. (*H. W. Henshaw*).	Salvin-Godman Coll.
o'. ♀ ad. sk.	Michigan.	Prof. Steere [P.].
p'. ♂ ad. st.	Rockport, Indiana.	Prof. Kirtland [P.].
q', *r'*. Pull. sk.	Waukegan, Illinois, June (*E. W. Nelson*).	Salvin-Godman Coll.
s', *t'*. ♂ imm. sk.	Menomonee, Wisconsin, Oct. (*E. W. Nelson*).	Salvin-Godman Coll.
u'. ♂ imm. sk.	Deadwood, Dakota, Oct. (*V. Bailey*).	Salvin-Godman Coll.
v'. ♂ imm. sk.	Oregon.	Salvin-Godman Coll.
w'. ♂ imm. sk.	Fort Klamath, Oregon, Nov. (*C. Bendire*).	Salvin-Godman Coll.
x'. ♀ ad. sk.	Dalles, Oregon, Nov. (*H. W. Henshaw*).	Salvin-Godman Coll.
y'. ♂ imm. sk.	Columbia River, Oregon, Oct. (*H. W. Henshaw*).	Salvin-Godman Coll.
z'. ♂ ad. sk.	Walla-Walla, Washington Territory, Oct. (*C. Bendire*).	Salvin-Godman Coll.
a'', *b''*. Imm. sk.	Snake River, Washington Territory, Sept. (*C. H. Merriam*).	Salvin-Godman Coll.
c''–*f''*. ♂ ♀ ad., imm., & juv. sk. et st.	Colville, W. side of Rocky Mountains.	J. K. Lord, Esq. [P.].
g'', *h''*. ♂ ad. et ♀ imm. sk.	Lake Osoyoos.	J. K. Lord, Esq. [P.].
i''. ♂ imm. sk.	Cascade Mountains.	J. K. Lord, Esq. [P.].
k''–*n''*. Ad. et imm. sk.	Fraser River.	J. K. Lord, Esq. [P.].

11. TETRASTES.

Type.

Tetrastes, *Keys. & Blas. Wirbelth.* pp. lxiv, 109, 200 (1840) ..... T. bonasia.

Sexes different.

Tail composed of 16 feathers, bluntly wedge-shaped, the outer feathers very little shorter than the central pair.

1st primary considerably shorter than the 2nd, and falls between the 7th and 8th; 4th slightly the longest.

Tarsus half-feathered, shorter than the middle toe and claw.

A short crest. Axillaries moderately long; barred or mottled with black and white.

Range. Europe and N. and Central Asia.

Key to the Species.

A. Feathers of the breast black, margined with white and sometimes a white spot in the middle.
  a. Chin and throat black ..... *bonasia* ♂, p. 90.
  b. Chin and throat mostly white ..... *bonasia* ♀, p. 90.
B. Feathers of the breast sandy grey, with narrow black bars.
  c. Chin white; throat black, tipped with dark red; chest reddish black, barred and tipped with grey ..... *griseiventris* ♂, p. 93.
  d. Chin white; throat black, tipped with buff; chest black, irregularly barred with rufous and tipped with grey ..... *griseiventris* ♀, p. 93.
C. Feathers of the breast black, barred and tipped with white; outer tail-feathers black, with wide-set white bars and white tips.
  e. Chin and throat black ..... *severtzovi* ♂, p. 93.
  f. Chin and throat buff, tipped with black .. *severtzovi* ♀, p. 93.

1. Tetrastes bonasia.

Hazel Hen, *Will. Orn.* p. 126, pl. 31 (1676); *Lloyd, Game B. Swed. & Norw.* p. 112, pl. (1867).

La Gelinote, *D'Aubent. Pl. Enl.* [nos. 474, 475]; *Briss. Orn.* i. p. 191 (1760); *Buff. Hist. Nat. Ois.* ii. p. 274 (1772).

Tetrao bonasia, *Linn. S. N.* i. p. 275 (1766); *Gm. S. N.* i. pt. ii. p. 753 (1788); *Lath. Ind. Orn.* ii. p. 640 (1790); *Beseke, Beytr. Vög. Kurl.* p. 70 (1792); *Bechst. Nat. Deutschl.* iii. p. 500 (1793); *Pall. Zoogr. Rosso-As.* ii. p. 70 (1811); *Temm. Pig. et Gall.* iii. pp. 174, 706 (1815); *Nilss. Orn. Svec.* i. p. 305 (1817); *Steph. in Shaw's Gen. Zool.* xi. p. 271 (1819); *Roux, Orn. Prov.* ii. p. 29, pl. 254 (1830); *Naum. Nat. Vög. Deutschl.* vi. p. 358, pl. 158 (1833); *Démid. Voy. Russ. Mérid.* iii. p. 219 (1840); *Midd. Sibir. Reis.* ii. pt. ii. p. 289 (1851); *Schinz, Nat. Vög.* p. 158, pl. 78 (1853); *Sundev. Svensk. Fogl.* pl. xxxiii. figs. 4, 5 (1856); *Nilss. Skand. Faun., Fog.* ii. p. 40 (1858); *Companyo, Hist. Nat. Pyrén.* iii. p. 198 (1863); *Bree, B. Eur.* iii. p. 203, pl. (1867); *David, N. Arch. Mus. Bull.* iii. p. 37 (1867) [Mongolia]; *Radakoff, Hand-Atl.* Map 15 (1876) [Whole distribution]; *Palm. J. f. O.* 1876, p. 42 [Finland]; *Bau, etc. J. f. O.* 1877, p. 325 [Germany], 1878, p. 417; *Finsch, Ibis,* 1877, p. 64 [Obi R.]; *Finsch, Verh. ges. Wien,* xxix. p. 233 (1880) [Obi R.]; *Cab. J. f. O.* 1880, pp. 70, 393, 1882, p. 90, 1883, p. 61, 1886, p. 347, 1887, p. 568 [Germany]; *Seebohm, Ibis,* 1882, p. 380 [Archangel]; *id. Ibis,* 1884, p. 35 [Yezo]; *Csató, Zeit. ges. Orn.* ii. p. 482 (1885) [Hunyad]; *Meyer & Helm, Zeit. ges. Orn.* iv. p. 371 (1888); *Seebohm, B. Jap.* p. 373 (1890); *Altum, J. f. O.* 1891, p. 103; *Hartert, Ibis,* 1892, p. 511 [E. Prussia]; *Campbell, Ibis,* 1892, p. 248 [Corea].

Tetrao betulinus, *Scop. Ann. I.* p. 119, no. 172 (1769); *Gm. S. N.* i. pt. ii. p. 749 (1788); *Lath. Ind. Orn.* ii. p. 637 (1790).

Birch Grouse, *Lath. Gen. Syn.* ii. pt. ii. p. 735 (1783); *id. Gen. Hist. B.* viii. p. 245 (1823).

Hazel Grous, *Lath. Gen. Syn.* ii. pt. ii. p. 744 (1783); *Penn. Arct. Zool.* ii. p. 317 (1785); *Lath. Gen. Hist. B.* viii. p. 242 (1823); *Chapman, Wild Spain,* p. 3 (1893) [Basque Provinces, N. Spain].

Tetrao canus, *Sparrm. Mus. Carls.* fasc. i. pl. 16 (1784) [albino]; *Gm. S. N.* i. pt. ii. p. 753 (1788); *Lath. Ind. Orn.* ii. p. 640 (1790).

Helsingian Grous, *Lath. Gen. Syn. Suppl.* i. p. 217 (1787); *id. Gen. Hist. B.* viii. p. 244 (1823).

Bonasia sylvestris, *Brehm, Vög. Deutschl.* p. 514 (1831); *Bonap. Rev. Orn. Eur.* p. 174 (1850); *Jaub. & Lapomm. Rich. Orn.* p. 430 (1859); *Blakist. Ibis*, 1862, pp. 324, 329 [N. Japan]; *Whitely, Ibis*, 1867, p. 204 [Hakodadi]; *Fritsch, Nat. Vög. Europ.* p. 280 (1870), pl. 31. figs. 1 & 2 (1871).

Bonasia rupestris, *Brehm, Handb. Vög. Deutschl.* p. 513 (1831).

Bonasia europæa, *Gould, B. Eur.* iv. pl. 251 (1837).

Tetrastes bonasia, *Keys. & Blas. Wirbelth.* p. 200 (1840); *Brandt in Hofmann, N. Ural Exp.* ii. App. p. 69 (1856); *Collett, Vid. Selsk. Forh. Christ.* 1869, p. 158; *Swinh. P. Z. S.* 1871, p. 400 [N. Chelee]; *Alst. & Brown, Ibis*, 1873, p. 66 [Archangel]; *Seebohm & Brown, Ibis*, 1876, p. 221 [Lower Petchora]; *Collin, Skand. Fugle*, p. 416, *Suppl.* pl. 4 (1877); *David & Oust. Ois. Chine*, p. 390 (1877); *Blakist. & Pryer, Ibis*, 1878, p. 226 [Yezo]; *Seebohm, Ibis*, 1879, p. 147 [Yenisei]; *Brandt, J. f. O.* 1880, p. 241 [St. Petersburg, S. Finland]; *Boyd. Consp. Av. Ross.* fasc. i. p. 30 (1884); *Pleske, Uebers. Vög. Kola*, p. 306 (1886).

Bonasa sylvestris, *Gray, List of B.* pt. iii. *Gall.* p. 46 (1844); *Elliot, P. Ac. Philad.* 1864, p. 23; *id. Mon. Tetr.* pl. iv. (1865); *Degl. & Gerbe, Orn. Europ.* ii. p. 52 (1867).

Bonasa albigularis, *Brehm, Vogelf.* p. 262 (1855) [Kamtschatka].

Tetrao (Tetrastes) bonasia, *Schr. Reis. Amur-L.* i. p. 400 (1859); *Radde, Ost-Sib.* ii. p. 301 (1863).

Bonasa betulina, *Gray, List Gallinæ Brit. Mus.* p. 89 (1867); *id. Hand-l. B.* ii. p. 277 (1870); *Dress. B. Eur.* v. p. 193, pl. 486 (1871); *Collett, Forh. Vid. Selsk. Christ.* 1872, p. 237 [N. Norway]; *Danf. & Brown, Ibis*, 1875, p. 417 [Transylvania]; *Tacz. Bull. Soc. Zool. Fr.* i. p. 242 (1876), ii. p. 153 (1877) [Poland]; *Gigl. Ibis*, 1881, p. 206 [E. Alps]; *Saund. Ibis*, 1884, p. 387 [Pyrenees]; *Gigl. Av. Ital.* p. 345 (1886); *Salvad. El. Ucc. Ital.* p. 197 (1887); *Gigl. Av. Ital.* i. p. 534 (1889), ii. p. 646 (1890), iii. p. 508 (1891); *Saund. Ibis*, 1891, p. 186 [Switzerland].

Bonasia betulina, *Dybowski, J. f. O.* 1868, p. 336 [Daouria]; *Tacz. J. f. O.* 1873, p. 98; *Bolau, J. f. O.* 1881, p. 62; *Meier, J. f. O.* 1885, p. 95 [E. Prussia]; *Tacz. P. Z. S.* 1887, p. 609, 1888, p. 467 [Corea]; *Dörr. J. f. O.* 1888, p. 89.

Bonasa bonasia, *Stejn. Am. Nat.* 1884, p. 774; *Tschusi zu Schmidh. Orn. Jahrb.* i. p. 161 (1890); *Meyer, Vog.-Skel.* pl. clxxx. (1892).

Tetrastes betulinus, *Schal. Zeit. ges. Orn.* ii. p. 42 (1885).

Tetrastes bonasa, *Olphe-Gall. Faun. Orn. Eur. Occ.* fasc. 37–40, p. 43 (1886).

Adult male. General colour above grey, rufous, or some intermediate stage; top of the head, short crest, back and sides of the neck, and mantle barred with black; the feathers on the sides of the neck rather long, tipped with white and showing some tendency towards the formation of a ruffle as in *Bonasa*; rest of the lower back, rump, and upper tail-coverts more or less finely mottled with black and with black shaft-stripes; scapulars and outer secondaries blotched with black, the shorter scapulars and sometimes the secondaries spotted with white at the extremities; wing-coverts,

mostly with white tips, quills dull blackish brown, the outer webs mottled with rufous or buff; chin and throat black, circumscribed by a white line, parting across the forehead and traversing the cheeks below the eye; a small white patch behind the eye; ear-coverts elongate, brown barred with dusky; front of neck and chest brown or rufous brown, with a subterminal black band and white tips; rest of the underparts with dark centres and white margins and often, especially on the breast and belly, with a mesial white spot, but the feathers on the sides and flanks are generally more rufous; vent and tarsi white; centre pair of tail-feathers brownish or reddish grey, indistinctly barred and mottled with black and buff and narrowly tipped with grey; outer tail-feathers mottled with grey and black, with a wide subterminal black band and white tip. Total length 14 inches, wing 6·5, tail 4·9, tarsus 1·3.

Adult female differs chiefly from the male in having the chin and throat mostly white and in being slightly smaller.

Young birds have the feathers of mantle, scapulars, and wing-coverts barred and blotched with black and with marked buff shaft-stripes; chin and throat white; chest and upper breast reddish brown, blotched with black and mixed with white; rest of underparts mostly white, but the sides and flanks are usually strongly barred with black; all the tail-feathers are greyish brown, or reddish grey indistinctly barred and mottled with dusky.

Hab. Europe and N. and Central Asia; ranging in the west to Scandinavia, and in the east to Kamtschatka, Saghalien, and Yezo, Japan, southwards to N. Spain, N. Italy, Transylvania, the Altai Mountains, and N. China.

a–c. ♂ ♀ ad. sk. et st.	France.	Purchased.
d. ♂ ad. sk.	Germany.	Gould Coll.
e, f. ♂ imm. et pull. sk.	Norway, July.	Gould Coll.
g. ♂ ad. sk.	Eidsvold, Norway, March.	Prof. R. Collett [P.].
h, i. ♂ ♀ ad. sk.	Selbo, Norway, April.	Prof. R. Collett [P.].
k. ♂ ad. sk.	Sweden, Dec. (*H. Wheelwright*).	Tweeddale Coll.
l–o. ♂ ♀ ad. et imm. sk.	Helsingfors, Finland, March.	Dr. F. W. Forssell [C.].
p, q. ♀ ad. st.	Russia.	Purchased.
r. ♀ ad. sk. [var.].	St. Petersburg.	J. Brenchley, Esq. [C.].
s, t. Juv. sk. et st.	Archangel.	Dr. R. Bowdler Sharpe [P.].
u. ♂ ad. sk.	River Kama, Perm.	H. E. Dresser, Esq. [P.].
v. ♀ ad. sk.	Malo Altymskoie, Obi River, July.	Dr. O. Finsch [C.].
w. ♀ ad. sk.	Saiar Mts., Altai.	St. George Littledale, Esq. [P.].
x–c'. ♂ ♀ ad. et juv. sk.	S. Manchuria, June.	Dr. H. M. James [P.].
d', e'. ♂ ♀ imm. sk.	S. Yezo, Oct. (*T. W. Blakiston*).	Tweeddale Coll.

f'. ♀ imm. sk.	Hakodadi, Aug.	Dr. McKinlay [P.].
g'–i'. ♂ ♀ ad. sk. et st.	Hakodadi (*H. Whitely*).	Tweeddale Coll.

Hybrid between Lyrurus tetrix *and* Tetrastes bonasia. *See* p. 58.

2. Tetrastes griseiventris.

Tetrastes griseiventris, *Menzb. Bull. Mosc.* lv. pt. i. p. 105, pl. iv. (1880) [Perm]; *Reich. & Schal. J. f. O.* 1881, p. 73; *Homeyer, MT. orn. Ver. Wien*, 1883, p. 228.

Tetrao griseiventris, *Seebohm, Ibis*, 1884, p. 430, pl. xi.; *id. P. Z. S.* 1884, p. 409.

Adult male. Easily distinguished from *T. bonasia* by having no white tips to the feathers on the sides of the neck, and in fact no trace of the incipient ruffle: the scapulars and wing-coverts also devoid of any white markings: the chin white; throat black, each feather tipped with dark red and not circumscribed by any white band; fore part of neck and chest a mixture of rufous and black, barred and tipped with grey; rest of the underparts grey with indistinct bars of black, becoming very faint on the thighs; and the black band across the outer tail-feathers not nearly so well defined and more or less mottled with buff. Total length 14 inches, wing 6·5, tail 4·7, tarsus 1·3.

Adult female. Differs from the male in having the feathers of the throat black, widely tipped with buff; those of the chest black, barred or marked with rufous and tipped with sandy grey; and the rufous feathers of the sides and flanks with wide irregular black bars.

Hab. Eastern Russia; Government of Perm.

3. Tetrastes severtzovi.

Tetrastes sewertzowi, *Prjev. Mongolia*, ii. p. 130, pl. xviii. (1876) *id. in Rowl. Orn. Misc.* ii. p. 430, pl. 52 (1877); *Dedit. J. f. O.* 1886, pp. 538, 540 [Hoangho & Koko-nor].

Adult male. Differs chiefly from *T. bonasia* in having not only the mantle, but the whole of the lower back, rump, and upper tail-coverts equally distinctly barred with black; on each side of the neck a more marked line of elongate, black, white-tipped feathers, indicating the incipient ruffle; the whole of the underparts black, barred and tipped with white, the sides, as usual, being mixed with rufous; all the outer tail-feathers black, with narrow wide-set white bars and tips. Total length 13·5 inches, wing 6·7, tail 5·3, tarsus 1·5.

Adult female. Differs chiefly from the female of *T. bonasia* in the same respects as the male, from which latter she is distinguished by having the chin and throat buff tipped with black, as well as by her somewhat smaller size.

Hab. Kansu, Koko-nor, and the Hoangho River.

a, b. ♂ ♀ ad. sk.	Kansu, Oct.	Berezowsky Coll.

Family II. PHASIANIDÆ.

Nostrils never hidden by feathers.

Tarsi partially or entirely naked, and often armed with spurs; toes naked, and never pectinate along the sides.

Key to the Genera.*

I. The cutting-edge of the lower mandible not serrated.

a. First primary longer than or equal to the tenth primary †; tail shorter, usually much shorter, than the wing; sides of the head feathered, with or without a naked space surrounding the eye. (*Perdicinæ.*)

a'. Upper half of tarsi covered with feathers (first primary equal to the third; tail of 14 feathers) ..... 1. Lerwa, p. 100.

b'. Feathers on the tarsi scarcely extending below the joint.

a''. Tail with 20 to 22 feathers..... 3. Tetraogallus, [p. 103.

b''. Tail with 16 to 18 feathers.

a'''. Tail $\frac{3}{4}$ the length of the wing; tarsi of male armed with stout blunt spurs ..... 2. Tetraophasis, [p. 102.

b'''. Tail $\frac{1}{2}$ the length of the wing; tarsi of male without spurs..... 9. Perdix, p. 185.

c''. Tail with 14 feathers.

c'''. Tail half or more than half the length of the wing.

*a*⁴. Throat covered with feathers.

*a*⁵. First primary is equal to the sixth; sides and flanks strongly barred, in marked contrast to the rest of the plumage ..... 4. Caccabis, p. 110.

*b*⁵. First primary varies in length between the seventh and the tenth; sides and flanks not barred, or if barred do not contrast with the rest of the underparts ..... 6. Francolinus, [p. 127.

*b*⁴. Throat naked (first primary is equal to or rather longer than the tenth)..... 7. Pternistes, [p. 173.

d'''. Tail less than half the length of the wing.

*c*⁴. Hind toe with a well-developed claw; tarsi in male without spurs ..... [p. 205.
13. Arboricola,

* N.B.—The generic characters are founded on the males, and are thus not always applicable to the females.

† If slightly shorter, as in *Francolinus squamatus* and *F. schuetti*, the shortness of the tail at once distinguishes them as *Perdicinæ*.

d^4. Hind toe with a rudimentary claw; tarsi in male armed with one or more pairs of spurs ..... 15. Caloperdix, [p. 222.

d''. Tail with 10 to 12 feathers.

e'''. First primary falls between the sixth and tenth.

e^5. First primary is equal to the tenth.

c^5. Hind toe with a rudimentary claw.

a^6. Head crested; bill moderately stout ..... 16. Rollulus, p. 225.

b^6. Head with no crest; bill very stout ..... 17. Melanoperdix, [p. 227.

d^5. Hind toe with a well-developed claw.

c^6. Wing 6 inches: short crest of the head and under tail-coverts crimson; tarsi without spurs (but only female known) ..... 14. Hæmatortyx, [p. 221.

d^6. Wing more than 7 inches: no crest; tarsi in male armed with a pair of sharp spurs .. 8. Rhizothera, [p. 183.

e^6. Wing less than 4 inches; no crest; tarsi in the male armed with blunt tubercles. . 12. Microperdix, [p. 202.

f^4. First primary varies in length between the sixth and eighth.

e^5. Wing less than 4 inches; tarsi in male armed with a blunt tubercle ..... 11. Perdicula, [p. 197.

f^5. Wing more than 4 inches.

f^6. Bill yellowish; general colour of plumage isabelline ..... 5. Ammoperdix, [p. 123.

g^6. Bill black; plumage varied with bright colours ..... 10. Margaroperdix, [p. 195.

f'''. First primary falls between the second and fourth.

g^4. Axillaries long and pure white .. 18. Coturnix, p. 229.

h^4. Axillaries short and grey..... 19. Synœcus, p. 246.

e''. Tail with 8 feathers..... 20. Excalfactoria, [p. 249.

b. First primary considerably shorter than the tenth primary* (or if longer, as in *Phasianus*, the tail is always longer than the wing); the tail is shorter, or much longer, than the wing; sides of the head feathered or entirely naked. (*Phasianinæ*.)

e'. Feathers of the upper parts not squarely truncate.

f''. If the head and neck are mostly naked, the tail is always longer than the wing.

* In *Phasianus* the first primary is about equal to the eighth and considerably longer than the tenth; but the length of the tail is always greater than that of the wing.

g'''. Upper tail-coverts do not exceed the tail in length.
*i*⁴. If the head and neck are mostly naked, the former is ornamented with wattles.
*g*⁵. Tail considerably shorter than wing.
*h*⁶. Tail with 10 feathers; wing less than 4 inches ..... 24. Ophrysia, p. 265.
*i*⁶. Tail with 14 feathers; wing more than 5 inches.
*a*⁷. Plumages of sexes similar; spurs, if present in male, usually absent in female.
*a*⁸. A large naked space behind the eye; tarsi not armed with spurs..... 21. Ptilopachys, [p. 255.
*b*⁸. No marked naked space behind the eye; tarsi in male, and sometimes in female, armed with spurs ..... 22. Bambusicola, [p. 257.
*b*⁷. Plumages of sexes different; females, as well as males, nearly always armed with one or more pairs of spurs.
*c*⁸. Sides of the face naked round the eye.
*a*⁹. Bill rather slender and elongate; crest short; (under tail-coverts never crimson)..... 23. Galloperdix, [p. 260.
*b*⁹. Bill stout, short, and wide; crest well developed; (under tail-coverts in the male crimson) ..... 25. Ithagenes, [p. 267.
*d*⁸. Sides of head entirely naked..... 28. Acomus, p. 283.
*h*⁶. Tail with 18 feathers.
*c*⁷. Bill rather feeble; upper tail-coverts extend much more than halfway up the tail; a large inflatable wattle beneath the throat of the male ..... 26. Tragopan, [p. 271.
*d*⁷. Bill long and very strong; upper tail-coverts extend half or less than halfway up the tail; no wattle beneath the throat of the male ..... 27. Lophophorus, [p. 277.
*h*⁵. Tail about as long, longer, or very much longer than the wing.
*l*⁶. No elevated comb on the top of the head.

e^7. Tail with 32 feathers (28 in female) ..... 30. Lobiophasis, [p. 291.

f^7. Tail with 20–24 feathers.

e^8. An elongate white ear-tuft on each side of the head; tail-feathers never ocellated ..... 31. Crossoptilon, [p. 293.

f^8. No elongate ear-tuft on each side of the head; tail-feathers ornamented with round metallic ocelli ..... 38. Polyplectron, [p. 353.

g^7. Tail with 16–18 feathers.

g^8. Occipital crest absent or very short.

c^9. Outer tail-feathers metallic purplish green; tail with 16 feathers.. 39. Chalcurus, [p. 361.

d^9. Outer tail-feathers not metallic purplish green; tail with 16 or 18 feathers ..... 35. Phasianus, [p. 318.

h^8. A well-developed occipital crest.

e^9. Sides of the head naked, or a large naked space surrounds the eye.

a^{10}. Crest more or less erect, composed of tufted feathers with shafts naked at the base ..... 29. Lophura, p. 286.

b^{10}. Crest recumbent, composed of long soft hair-like feathers.

a^{11}. No erectile cape-like feathers covering the back of the neck; upper tail-coverts not very long.

a^{12}. Middle tail-feathers curved outwards at the extremity, and subequal or not much longer than the second pair ..... 32. Gennæus, p. 296.

b^{12}. Tail like that of *Phasianus*; middle tail feathers straight, and considerably longer

than the second pair .... 34. Catreus, p. 316.

b^{11}. An erectile cape of feathers covering the back of the neck; upper tail-coverts very long ..... 36. Chrysolophus, [p. 339.

f^{9}. Sides of the head feathered; no marked naked space round the eye; upper tail-coverts more than half the length of the tail, which is never much longer than the wing; plumage never very brilliant ..... 33. Pucrasia, p. 310.

m^{6}. An elevated comb on the top of the head; sides of the head and throat mostly naked, or ornamented with one median or a pair of lateral wattles .. 37. Gallus, p. 343.

k^{4}. Head and neck mostly naked, never ornamented with wattles; crown feathered; middle tail-feathers enormously developed.

i^{5}. Secondaries enormously developed, much longer than the primaries ..... 40. Argusianus, [p. 362.

k^{5}. Secondaries about as long as the primaries ..... 41. Rheinardtius, [p. 366.

k'''. Upper tail-coverts far exceed the tail in length ..... 42. Pavo, p. 368.

g'. Head and neck mostly naked, sometimes crested, sometimes with a bony helmet; tail never longer than the wing.

i'''. Middle tail-feathers are not elongate and tapered, and not much longer than the outer pair; feathers of mantle and chest short and rounded.

l^{4}. General colour of plumage black; tarsi armed with spurs; a line of short feathers down the middle of the crown..... 43. Phasidus, p. 373.

m^{4}. General colour of plumage black, finely vermiculated with grey; tarsi armed with spurs; chest and mantle white; top of the head naked ..... 44. Agelastes, [p. 374.

n^{4}. General colour of plumage black, finely spotted with white or pale blue.

l^{5}. Top of the head naked, with a bony helmet; outer webs of outer secondaries are not pure white; plumage spotted with white ..... 45. Numida, p. 374.

m^5. Top of the head with a full feathered crest; outer webs of outer secondaries pure white; plumage spotted with pale blue. 46. GUTTERA, p. 380.

k'''. Middle tail-feathers elongate and pointed, about twice as long as the outer pair; feathers of mantle and chest very long and pointed ..... 47. ACRYLLIUM, [p. 385.

d'. Feathers of upper parts squarely truncate 48. MELEAGRIS, [p. 386.

II. The cutting-edge of the lower mandible is serrated. (*Odontophorinæ.*)

c. Tarsus shorter than the middle toe and claw.

e'. Tail more than half the length of the wing.

h''. Tail as long as or nearly as long as the wing. Size large: wing more than 5·5 inches (1st primary much shorter than the 10th) ..... 49. DENDRORTYX, [p. 392.

i''. Tail about $\frac{3}{4}$ of the length of the wing or less; wing less than 5·5 inches.

l''. Crest well or fairly well developed.

o^4. Tail with 14 feathers (sexes similar; crest rather short; 1st primary equal to the 8th) ..... 50. CALLIPEPLA, [p. 394.

p^4. Tail with 12 feathers.

n^5. Sexes similar.

n^6. Crest composed of two very long black feathers; 1st primary falls between the 7th and 8th; sides uniform grey; flanks chestnut, irregularly barred with white ..... 51. OREORTYX, p. 397.

o^6. Crest of several pairs of feathers, and not unusually elongate; 1st primary falls between the 9th and 10th; sides and flanks barred with black and white ..... 53. PHILORTYX, [p. 405.

o^5. Sexes different (feathers of crest long or fairly long; 1st primary falls between the 8th and 9th).

p^6. Tail $\frac{3}{4}$ of the length of the wing, or more ..... 52. LOPHORTYX, [p. 399.

q^6. Tail rather more than $\frac{1}{2}$ the length of the wing ..... 54. EUPSYCHORTYX, [p. 407.

m'''. No distinct crest (sexes different; 1st primary falls between the 7th and 8th) ..... 55. ORTYX, p. 414.

f'. Tail not more than half the length of the wing.

k''. 1st primary falls between the 7th and 8th (sexes different; claws very long).

n'''. Sides of head and neck with black and white pattern; sides of chest and breast beautifully ocellated with white or buff ..... 56. CYRTONYX, p. 425.

o'''. Sides of head and neck with no distinct pattern; sides of chest and breast with white shaft-stripes .... 57. DACTYLORTYX, [p. 429.

l''. 1st primary shorter than the 10th (sexes similar, or different; claws moderate)..... 58. ODONTOPHORUS, [p. 430.

d. Tarsus longer than the middle toe and claw (1st primary falls between the 8th and 9th; tail of 10 feathers)..... 59. RHYNCHORTYX, [p. 443.

1. LERWA.

	Type.
Lerwa, *Hodgs. Madr. J.* v. p. 300 (1837); *id. J. As. Soc. Beng.* xxiv. p. 580 (1855)	L. lerwa.
Tetraoperdix, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844); *id. J. As. Soc. Beng.* xxiv. p. 580 (1855)	L. lerwa.
Tetraonoperdix, *Agass. Index Univers.* p. 366 (1846) ..	L. lerwa.
Lerva, *Blyth, Cat. B. Mus. As. Soc.* p. 248 (1849).....	L. lerwa.

Sexes similar.

Tail with 14 feathers, about $\frac{4}{7}$ of the length of the wing, rounded, the outer pair $\frac{3}{4}$ of an inch shorter than the middle pair: all similarly coloured.

The 1st primary equal to the 3rd, and only slightly shorter than the 2nd and longest.

Tarsus feathered for half its length, rather shorter than the middle toe and claw, armed in the male with a stout blunt spur.

Range. Himalayas to Western China.

1. Lerwa lerwa.

Perdix lerwa, *Hodgs. P. Z. S.* 1833, p. 107 [Nepal]; *Gray, Ill. Ind. Zool.* ii. pl. 44. fig. 1 (1834).

Lerwa nivicola, *Hodgs. Madr. J.* 1837, p. 301; *Gray, Gen. B.* p. 61 (1840); *id. List of B.* pt. ii. *Gall.* p. 36 (1844); *id. Cat. Hodgs.* ed. i. p. 127 (1846); *id. Gen. B.* iii. p. 508 (1846); *Gould, B. Asia*, vi. pl. 75 (1855); *Jerd. B. Ind.* iii. p. 555 (1863); *Gray, List Gallinæ Brit. Mus.* p. 83 (1867); *Beavan, Ibis*, 1868, p. 382; *Gray, Hand-l. B.* ii. p. 274 (1870); *Swinh. P. Z. S.* 1871, p. 400 [Moupin]; *Hume, Nests & Eggs Ind. B.* p. 536 (1873); *David & Oustalet, Ois. Chine*, p. 392 (1877); *Hume & Marsh. Game B. Ind.* ii. p. 1, pl. (1879); *Marshall, Ibis*, 1884, p. 423 [Chamba]; *Oates, ed. Hume's Nests & Eggs Ind. B.* iii. p. 428 (1890); *Seebohm, Ibis*, 1891, p. 380 [W. Sze-chuen].

Tetraoperdix (Lerwa) nivicola, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844); *Icon. ined. in Brit. Mus.* nos. 108, 109.

Lerva nivicola, *Adams, P. Z. S.* 1858, p. 501, 1859, p. 186 [High ranges of Cashmere and Ladák]; *David, N. Arch. Mus. Bull.* vii. p. 11, no. 360 (1871).

Lerwa lerwa, *Hartert, Kat. Mus. Senckenb.* p. 195 (1891).

Adult male and female. Head, neck, and the whole of the upper parts black, with narrow cross bars of white, except on the upper back and wing-coverts, where they are buff or rufous. The outer secondaries, scapulars, and some of the outer secondary coverts are dark rufous towards the extremity, mixed here and there with buff and barred and mottled with black. Primaries, primary-coverts, and bastard wing dark brown; the inner primaries narrowly tipped and often dotted on the margin of the outer web with

white. Inner secondaries black, irregularly barred, mottled, and widely tipped with white. Chest and upper breast rich chestnut, each feather with the basal half margined with white and widely barred with black; but these marks are hidden, except when the feathers are lifted up. The lower breast, belly, sides, and flanks are the same; but the white margins of the feathers extend nearly to the extremity, giving these parts a streaked appearance. The middle of the belly and thighs are barred with black and whitish buff or rufous. The under tail-coverts are chestnut tipped with white. Tail-feathers black, barred and mottled with white. Iris brown, sometimes reddish. Bill and legs bright coral-red. Total length 14 inches, wing 7·5, tail 4·5, tarsus 1·7.

In *younger birds* the barrings on the head and upper parts are wider and all buff; on the underparts of the neck they are less clearly defined than in the adult and gradually merge into the chest, all the feathers of which, like those of the breast, are mottled and barred with black nearly to the extremity.

The *chick* has the upper parts black, mottled and barred with rufous buff; the top of the head is covered with blackish down, the sides are white, with a black stripe on either side passing below the eye; the underparts are black, with irregular shaft-stripes and bars of buff; all the primaries are mottled on the margin of the outer web with whitish, and the terminal parts of the secondaries are black mottled with buff. Bill black; feet flesh-colour.

Hab. The higher ranges of the Himalayas, and extending northwards to Moupin and W. Sze-chuen, China.

a. ♂ ad. sk.	N.W. Himalayas.	Capt. S. Pinwill [P.].
b-*i*. ♂ ♀ ad. et imm. sk.	Jullooree Joul, close to the Snowy Range, Jan., Feb.	Hume Coll.
k-*r*. ♂ ♀ ad. et imm. sk.	Koteghur, Dec.	Hume Coll.
s-*u*. ♂ ♀ ad. sk.	Nunda, Kooloo, Feb.	Hume Coll.
v, *w*. ♀ imm. sk.	Hills beyond Simla, Sept. (*R. C. Beavan*).	Tweeddale Coll.
x-*z*. ♂ ♀ ad. et imm. sk.	Bhagarati Valley.	Hume Coll.
a'. ♀ imm. sk.	Kumaon (*Capt. Strachey*).	India Museum [P.].
b', *c'*. ♀ ad. et pull. sk.	Kumaon.	Hume Coll.
d'-*g'*. ♂ ♀ ad. et imm. sk.	Nepal.	B. H. Hodgson, Esq. [P.]. (Types of the species.)
h'-*l'*. ♀ ad. et imm sk.	Sikhim, Jan. (*L. Mandelli*).	Hume Coll.
m'. ♀ imm. sk.	Native Sikhim, April (*L. Mandelli*).	Tweeddale Coll.
n'-*y'*. ♂ ♀ ad. et imm. sk.	Native Sikhim, Feb., May, July, Aug., Oct., Dec. (*L. Mandelli*).	Hume Coll.
z'. ♂ ad. sk.	Darjeeling.	Hume Coll.
a''. ♀ imm. sk.	Hills N.W. of Darjeeling.	Hume Coll.
b''. Imperfect skeleton.	Nepal.	B. H. Hodgson, Esq. [P.].

2. TETRAOPHASIS.

Type.
Tetraophasis, *Elliot*, *Monog. Phas.* i. pl. xxi. (1871).. T. obscurus.

Sexes similar.

Tail with 18 feathers, wedge-shaped, rather long, about $\frac{3}{4}$ of the length of the wing.

1st primary falls between the 8th and 9th; 4th slightly longest.

Tarsus in male with a stout spur.

A large grey patch of downy feathers beneath each wing.

Axillaries very long, dark grey, tipped with chestnut.

Range. Mountains of Central and Eastern Thibet, north to Kansu and south to the Mekong River, Western China.

Key to the Species.

a. Chin, throat, and fore part of neck dark chestnut. *obscurus*, p. 102.
b. Chin, throat, and fore part of neck pale fawn-colour ..... *széchenyii*, p. 103.

1. Tetraophasis obscurus.

Lophophorus obscurus, *Verr. N. Arch. Mus. Bull.* v. p. 33, pl. vi. (1869) [Moupin].

Tetragallus (Tetraophasis) obscurus, *Gray*, *Hand-l. B.* ii. p. 275 (1870).

Tetraophasis obscurus, *Swinh. P. Z. S.* 1871, p. 399; *Elliot*, *Mon. Phas.* pl. xxi. [text] (1872); *Gould*, *B. Asia*, vii. [text] pl. 44 (1874); *Sclat. Ibis*, 1874, p. 169; *Prjev. Mongolia*, ii. p. 129 (1876); *id. in Rowley's Orn. Misc.* ii. p. 429 (1877) [Kansu]; *Dedit. J. f. O.* 1886, pp. 538, 540 [Koko-nor and Hoangho R.].

Adult male. Top and sides of the head dark grey, each feather with a narrow darker shaft-stripe; nape, sides of the neck, and mantle dull olive-brown, some of the feathers, especially on the lower parts of the mantle, with a blackish spot at the end of the shaft; rest of the back and rump brownish grey. Outer secondaries, scapulars, and wing-coverts olive-brown, each with a light terminal band shading into buff on the outer feathers. Primaries and rest of secondaries dark brown, the latter tipped and slightly margined on the outer web with buff. Chin, throat, and fore part of neck dark chestnut, indistinctly margined all round with buff. Chest and upper part of breast grey, each feather with a black shaft terminating in a black spot; rest of breast and belly grey mixed with buff; sides and flanks brown tipped with buff, some of the feathers with chestnut blotches on the outer web; under tail-coverts chestnut, widely tipped with white. Upper tail-coverts and centre pair of tail-feathers pale greyish brown, vermiculated with black and slightly tipped with white; second and third pairs more widely tipped with white and mixed with black; remaining pairs black, with the last fifth white and the basal part slightly mottled

with grey. Tarsi armed with a pair of spurs. Total length 18·6 inches, wing 8·3, tail 6·3, tarsus 2·2.

Adult female. Differs from the male only in having the outer webs of the secondaries and secondary coverts more or less mottled with buff towards the margin, and in lacking the spurs on the tarsi. Total length 18 inches, wing 8, tail 6, tarsus 2·1.

Hab. Eastern Thibet: ranging from Moupin to Koko-nor and the mountains of Kansu.

a, b. ♂ ♀ ad. sk.	Kansu, Jan.	Berezowsky Coll.

2. Tetraophasis széchenyii.

Tetraophasis széchenyii, *Madarász, Zeit. ges. Orn.* ii. p. 50, pl. ii. (1885); *id. Ibis*, 1886, p. 145 [Central Thibet]; *Oustal. Ann. Sci. Nat.* (7) xii. p. 314 (1892) [Thibet and Tà-tsién-loû].

Tetraophasis desgodinsi, *Oustalet, Le Nat.* 1886, p. 276 [Yer-ka-lo, Mekong R.]; *Sclat. & Saund. Ibis*, 1887, p. 112.

Adult male. Differs from the male of *T. obscurus* in having the lower back, rump, upper tail-coverts, and middle tail-feathers grey instead of pale olive-grey: the chin, throat, and fore part of neck pale fawn-colour; and the middle of the breast and belly mixed with rufous buff and blotched with chestnut, like the sides and flanks. Total length 17·6 inches, wing 8·9, tail 6·1, tarsus 2·2.

Adult female. Resembles the male, but has no spurs and is slightly smaller.

Hab. Mountains of Central Thibet, ranging north to the Sok Pass, east to Tà-tsién-loû, and south to Yer-ka-lo, Mekong River.

a. ♂ ad. sk.	Between Chiamdo and the Sok Pass, Thibet (*Thorold*).	Henry Seebohm, Esq. [P.].

3. TETRAOGALLUS.

	Type.
Tetraogallus, *Gray, Ill. Ind. Zool.* ii. pl. 46 (1833); *id. List Gen. B.* p. 62 (1840)	T. himalayensis.
Chourtka, *Motschoulski, Bull. Soc. Mosc.* i. p. 94, pls. viii. & xi. (1839)	T. caucasicus.
Megaloperdix, *Brandt, Bull. Ac. St. Pétersb.* viii. p. 190 (1841), i. p. 281 (1843)	T. caucasicus.
Oreotetrax, *Cab. in Ersch u. Grub. Encycl.* sect. 3, xxii. p. 144 (1846)	T. caucasicus.

Sexes similar or slightly different.

Tail about $\frac{2}{3}$ of the length of the wing, rounded, the outer pair of feathers about 2 inches shorter than the middle pair.

1st primary equal to the 6th; 2nd to the 4th subequal.

Tarsus equal to, or slightly longer than, the middle toe and claw.

A naked elongate patch behind the eye.

Range. Mountains of Asia, extending west to Asia Minor and the Caucasus, east to Western China, north to the Altai mountains, and south to the mountains near Shiraz and the Himalayas.

Key to the Species.

I. No white on the basal half of the primary quills.
  A. Chest white, divided from the breast by a grey band ..... *tibetanus* ♂ & ♀, p. 104.
  B. Chest grey ..... *henrici* ♂ & ♀, p. 106.
II. Basal half of the primary quills more or less white.
  C. Feathers of the sides and flanks edged with buff, rufous, and black.
    a. Secondaries with only traces of white near the base of the shaft. (Chest-feathers white, with wide subterminal black bars.) ..... *himalayensis* ♂ & ♀, [p. 106.
    b. Secondaries with the basal half more or less white.
      a'. Chest-feathers grey, with a black spot on the margin of both webs. *caspius* ♂, p. 108.
      b'. Chest-feathers grey, vermiculated with buff, and here and there a black spot..... *caspius* ♀, p. 108.
      c'. Chest-feathers black, margined, barred, and vermiculated with buff ..... *caucasicus* ♂ & ♀, p. 109.
  D. Feathers of the sides and flanks uniform white..... *altaicus* ♂ & ♀, p. 110.

1. Tetraogallus tibetanus.

Tetraogallus tibetanus, *Gould*, *P. Z. S.* 1853, p. 47 [Thibet]; *id. B. Asia*, vii. pl. 32 [text] (1853); *Jerd. B. Ind.* iii. p. 554 (1863); *Gray, List Gallinæ Brit. Mus.* p. 83 (1867); *id. Hand-l. B.* ii. p. 275 (1870); *Hend. & Hume, Lahore to Yark.* p. 281 (1873); *Scully, Str. F.* iv. p. 182 (1876) [Sanju Pass, E. Turkestan]; *David & Oustal. Ois. Chine*, p. 391 (1877) [Moupin]; *Prjev. Mongolia*, ii. p. 127 (1876); *id. in Rowley's Orn. Misc.* ii. p. 427 (1877) [Kansu, S. Koko-nor and N. Tibet]; *Hume & Marsh. Game B. Ind.* i. p. 275, pl. (1878); *Hume, Str. F.* vii. p. 430 (1878); *Sharpe, Second Yark. Miss., Aves*, p. 123 (1891).
Oreotetrax tibetana, *Radde, J. f. O.* 1876, p. 218.

Adult male and female. Top of the head, nape, and upper part of the mantle dark grey, shading into buff and greyish buff on the lower parts, and closely vermiculated with fine blackish lines. Feathers of the lower back the same, only margined on the sides with buff; rump and upper tail-coverts pale rufous, with the black vermiculations much farther apart. Lesser, median, and secondary coverts, scapulars, and outer secondaries blackish grey, finely vermiculated with buff, and widely margined with creamy white, the former only on the sides, the latter all round their margins. Primaries and primary-coverts dull greyish brown, the former tipped with creamy white, most strongly marked on the innermost feathers. Rest of the secondaries like the primaries, but with the last part of the outer web white. Lores and ear-coverts white. Sides of the

head, throat, and neck very dark grey; chin, middle of throat and neck and chest pure white, the latter divided from the rest of the underparts by a band of dark grey. The breast, belly, sides, flanks, and under tail-coverts white, margined with black on the sides, except some of the lower flank-feathers, which have only one black stripe down the middle. Thighs a mixture of grey and buff. Tail blackish, slightly tipped with rufous, the centre pair of feathers somewhat vermiculated with rufous. Iris brown or reddish brown. Bill orange-red. Legs and feet coral-red. Tarsus provided with a strong blunt spur in the male *. Total length 20 inches, wing 10·8, tail 6·2, tarsus 2·5.

Younger specimens differ from the adults in having the sides of the throat and neck black vermiculated with buff, and the whole of the chest buff vermiculated with black, and with usually a few white feathers of the adult plumage intermixed.

In *quite young specimens* there is a white superciliary streak edged above and below with black; the wing-coverts and scapulars are much more coarsely marked with buff on a black ground than in the adult, and each feather, together with those of the upper and lower back, has a buff spot at its extremity: the breast and rest of the underparts are whitish buff, without any black streaks; the primaries are mottled with buff at the tip, and the terminal part of the outer web of the secondaries is margined and mottled with white.

Hab. Thibet, ranging east to the Sanju Pass, E. Turkestan, west to Moupin, north to Kansu and Koko-nor, and south to the Himalayas.

a. ♀ ad. sk.	Ladak (*Capt. Strachey*).	India Museum [P.].
b. ♀ imm. sk.	Sahti Pass, Sept., 17,500 ft. (*J. Biddulph*).	Hume Coll.
c, *d*. ♀ imm. et juv. sk.	Sanju Pass, Kuen Lun Mts., Aug., Sept. (*G. Henderson*).	Hume Coll.
e. ♀ imm. sk.	Yarkand, Oct. (*G. Henderson*).	Hume Coll.
f. ♀ imm. sk.	Sikhim.	Hume Coll.
g–*k*. ♂ ad. et imm. sk.	Interior of Sikhim, Aug., Oct. (*L. Mandelli*).	Hume Coll.
l–*r*. ♂ ♀ ad. et imm. sk.	Native Sikhim, July, Dec.	Hume Coll.
s. ♀ imm. sk.	Darjeeling.	Hume Coll.
t–*v*. ♂ ♀ ad. et imm. sk.	Thibet.	Hodgson Coll (Types of the species.)
w–*a'*. ♂ ad., imm. et juv. sk.	Thibet, Sept., Nov. (*L. Mandelli*).	Hume Coll.

* There is no doubt that Gould was right, and that the adult male and female are perfectly similar in plumage. I have examined three specimens obtained by Prjevalsky in N. Thibet and Kansu, and described by him as adult females, and find they are all immature birds, and one of them is no doubt the identical specimen described from Kansu in Rowley's Orn. Misc. ii. p. 427.

2. Tetraogallus henrici.

Tetraogallus henrici, *Oustal. Ann. Sci. Nat.* (7) xii. pp. 295, 313 (1891) [Tà-tsién-loû].

Adult male. Differs from the male of *T. tibetanus* in having the colour of the throat and chest grey, with only a narrow white band down the middle of the chin and upper half of the throat, and the upper tail-coverts yellowish grey, not rufous. Total length ca. 26·4 inches, wing 11, tail 7·2, tarsus 2·2.

Adult female. Similar to the male.

Hab. Tà-tsién-loû, W. Sze-chuen, China.

3. Tetraogallus himalayensis.

Lophophorus nigellii, *Jard. & Selb. Ill. Orn.* pl. 141 (*nec iid. op. cit.* pl. 76).

Tetraogallus nigellii, *Gray, Ill. Ind. Zool.* ii. pl. 46 (1834); *Vigne, P. Z. S.* 1841, p. 6 [Cashmere and Little Thibet]; *Hodgs. in Gray's Zool. Misc.* p. 85 (1844); *Icon. ined. in Brit. Mus.* no. 781.

Tetraogallus himalayanus, *Gray, P. Z. S.* 1842, p. 105 [Himalayas]; *id. List of B.* pt. iii. *Gall.* p. 30 (1844); *Gould, B. Asia,* vii. pl. 30 [text] (1853); *Adams, P. Z. S.* 1858, p. 501, 1859, p. 186 [Cashmere and Ladâk]; *Jerd. B. Ind.* iii. p. 549 (1863); *Gray, List Gallinæ Brit. Mus.* p. 83 (1867); *Beavan, Ibis,* 1868, p. 382; *Gray, Hand-l. B.* ii. p. 275 (1870); *Heud. & Hume, Lahore to Yark.* p. 280 (1873) [Sanju Pass]; *Hume, Nests & E. Ind. B.* p. 535 (1873); *Scully, Str. F.* iv. p. 181 (1876) [Hills of Yarkand]; *Hume & Marsh. Game B. Ind.* i. p. 267, pl. (1878); *Finsch, Verh. Ges. Wien,* xxix. p. 237 (1880) [Saisan]; *Biddulph, Str. F.* ix. p. 358 (1880) [Gilgit]; *Scully, Str. F.* x. p. 138 (1881) [E. Turkestan]; *Biddulph, Ibis,* 1881, p. 93; *Scully, Ibis,* 1881, p. 586 [Gilgit]; *Seebohm, Ibis,* 1882, p. 425 [Samarkand]; *Severtz. Ibis,* 1883, p. 72 [Pamir, Alai, and Tian-shan Mts.]; *Marshall, Ibis,* 1884, p. 423 [Chamba]; *Scully, M. & B. N. Afghan.* p. 86 (1887) [Hindu Kush]; *Oates, ed. Hume's Nests & E. Ind. B.* iii. p. 46 (1890); *Sharpe, Second Yark. Miss.* p. 123, pl. xv. (1891).

Tetraogallus caucasicus, *Gray* (*nec Pall.*), *Cat. Hodgs.* ed. 1, p. 126 (1846); *Bree, B. Eur.* iii. p. 232, pl. (1867); *Fritsch, Nat. Vög. Europa,* p. 282 (1870), pl. 31. fig. 7 (1871).

Megaloperdix nigellii, *Severtz. Turkest. Jevotnie,* p. 68 (1873); *id. J. f. O.* 1875, p. 181.

Megaloperdix nigellii, *β* minor, *Severtz. Turkest. Jevotnie,* p. 68 (1873); *Dresser, Ibis,* 1876, p. 323.

Oreotetrax himalayensis, *Radde, J. f. O.* 1876, p. 217.

Tetraogallus caspius, *Dresser* (*nec Gmel.*), *Ibis,* 1876, p. 322.

Megaloperdix himalayensis, *Boyd. Consp. Av. Imp. Ross.* fasc. i. p. 39 (1884); *Pleske, Mém. Ac. St. Pétersb.* (7) xxxvi. no. 3, p. 47 (1888) [Kuli Kalau, Turkestan].

Adult male. Top of the head and upper part of the mantle pale grey tinged with buff; a large chestnut patch on either side of the nape, produced along the sides of the head as far as the eye; rest of the upper parts blackish grey, finely vermiculated with buff, the feathers of the lower back, rump, lesser, median, and secondary coverts and the scapulars edged on either side with buff, washed

with chestnut on the median and secondary coverts. Primaries with the basal two-thirds white and the rest blackish grey, finely mottled with rufous buff at the tips of the inner quills; primary-coverts blackish grey; secondaries dark grey, with the outer web vermiculated with buff, and a small white patch at the base next the shaft. Lores, superciliary stripes, sides of the head and neck, chin, throat, and fore part of the neck white, the latter terminated by a dark chestnut band, which also margins it laterally. Chest and upper breast white, with wide black transverse bars, less marked or absent on the latter *. Rest of the underparts blackish grey, finely vermiculated with buff; feathers of the sides and flanks purer grey, margined with chestnut and buff, often fringed externally with black. Under tail-coverts white. Centre pairs of tail-feathers rufous, thickly mottled with black, outer pairs with chestnut ends and the rest of the inner web and subterminal portion of the outer blackish †. Iris dark brown. Bill pale horny or slaty, dark at the point; cere and scale over nostril orange; naked patch behind the eye yellow. Legs and feet yellowish red or orange. Tarsi provided with a pair of stout blunt spurs. Total length 25·5 inches, wing 12·6, tail 7·8, tarsus 2·8.

Adult female. Scarcely differs in plumage from the male, but the spurs are absent, and generally the feathers on the front part of the forehead and above the eye are buff barred with grey. Total length 22·5 inches, wing 10·8, tail 6·8, tarsus 2·5.

In *younger examples* the chestnut patches on either side of the nape are more or less united, the upper part of the mantle is usually buff, and the outer primaries are pointed and mottled with rufous buff at the extremities.

In *a chick* the whole of the upper parts are buff, mottled and blotched with black; all the feathers of the mantle, wing-coverts, and scapulars have a pale stripe down the terminal part of the shaft, dilated into a triangular white spot at the extremity. Chest and breast rusty, widely tipped with white, edged internally with black; breast similar, but less rusty; tail rufous buff, barred and mottled with black.

Hab. Himalayas, ranging west to the Hindu Kush, and northwards through the Altai ranges.

a. ♀ ad. sk.	Himalayas.	J. R. Reeves, Esq. [P.].
b. Juv. sk.	Kumaon (*Capt. Strachey*).	India Museum [P.].
c. ♀ ad. sk.	Kumaon.	B. H. Hodgson, Esq. [P.].
d–l. ♂ ♀ ad. sk.	Bhagarati Valley.	Hume Coll.
m. ♀ ad. sk.	Simla.	Capt. Stackhouse Pinwill [P.].
n. ♀ imm. sk.	N.W. Himalayas (*S. Pinwill*).	Tweeddale Coll.

* In some specimens even the bars on the chest are nearly obsolete; this has apparently nothing to do with age or sex.

† In some the outer tail-feathers are chestnut, more or less mottled with black, except the inner and basal part of the inner webs, which are blackish grey.

o, *p*. ♂ imm., ♀ ad. sk.	Kooloo, Feb., Oct.	Hume Coll.
q–*s*. ♂ ♀ ad. sk.	Koteghur, March.	Hume Coll.
t. ♂ ad. sk.	Kotekhaie, Feb.	Hume Coll.
u–*w*. ♂ ♀ ad. sk.	Julluregheoul, Jan., Feb.	Hume Coll.
x. ♀ ad. sk.	Cashmere.	Hume Coll.
y. ♀ ad. sk.	Afghanistan (*W. Griffith*).	India Museum [P.].
z–*b'*. ♂ ad., imm., et juv. sk.	Ladak (*Capt. Strachey*).	India Museum [P.].
c'. ♂ imm. sk.	Sanju Pass, Kuen Lun Mts. (*Dr. Bellew*).	India Museum [P.].
d', *e'*. ♂ ♀ imm. sk.	Ferghana, March.	Henry Seebohm, Esq. [P.].
f'. ♀ ad. sk.	Saisan, May (*Finsch & Brehm*).	Geographical Society of Bremen.
g'. ♂ imm. sk.	Saiar Mts., Altai, Jan.	Henry Seebohm, Esq. [P.].
h', *i'*. ♂ ad. sk.	Tarbagatai, Saiar Mts., April, Nov.	St. Petersburg Museum [E.].
k', *l'*. Skeletons.		

4. Tetraogallus caspius.

Tetrao caspius, *Gm. Reise*, iv. p. 67, pl. 10 (1784); *id. S. N.* i. pt. ii. p. 762 (1788).

Perdix caspia, *Lath. Ind. Orn.* ii. p. 655 (1790); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 228 (1817).

Caspian Partridge, *Lath. Gen. Syn. Suppl.* ii. p. 283 (1802); *id. Gen. Hist.* viii. p. 290 (1823).

Lophophorus nigelli, *Jard. & Selb. Ill. Orn.* pl. 76 (*nec iid. op. cit.* pl. 141); *Gray, P. Z. S.* 1842, p. 105.

Perdix (Megaloperdix) nigelli, *Brandt, Bull. Acad. St. Pétersb.* iii. p. 188 (1845).

Tetraogallus caspius, *Gould, B. Asia*, vii. pl. 29 [text part.] (1853); *Selat. & Wolf, Zool. Sket.* (1) pl. 40 (1861); *Degl. et Gerbe, Orn. Europ.* ii. p. 55 (1867); *Gray, List Gallinæ Brit. Mus.* p. 82 (1867) [part.]; *id. Hand-l. B.* ii. p. 275 (1870); *Blanf. E. Pers.* ii. p. 275 (1876) [Elburz, Kurdistan, and higher ranges near Shiraz]; *Danford, Ibis*, 1877, p. 254, 1878, p. 29, 1880, p. 91 [Gök Mts., S. Asia Minor, Taurus, Armenia, Kurdistan]; *Seebohm, Ibis*, 1883, p. 27.

Tetraogallus caucasicus, *De Filippi* (*nec Pall.*), *Viagg. Pers.* i. p. 351 (1865).

Megaloperdix (Tetraogallus) caspia, *Bolle & Brehm, J. f. O.* 1873, p. 1.

Megaloperdix raddei, *Bolle & Brehm, J. f. O.* 1873, p. 4.

Tetraogallus challayei, *Oustal. Bull. Soc. Philom.* 1875, p. 54; *id. Journ. de l'Inst.* 1875, p. 353 [Erzeroom].

Oreotetrax caspia, *Radde, J. f. O.* 1876, p. 217.

Tetraogallus tauricus, *Dresser, P. Z. S.* 1876, p. 675.

Megaloperdix caspia, *Bogd. B. Caucas.* p. 142 (1879); *id. Consp. Av. Imp. Ross.* fasc. i. p. 39 (1884); *Radde, Orn. Caucas.* p. 343, pl. xxii. (1884) [Caucasus]; *Zaroudn. Bull. Mosc.* (n. s.) iii. p. 110 (1890) [Transcaspia].

Megaloperdix sp., *Radde & Walt. Ornis*, 1889, p. 85.

Adult male. Differs from *T. himalayensis* in its paler colour generally, the absence of chestnut on the nape and sides of the head, and in having the cheeks pale grey, shading into darker on the band which margins the sides of the throat and fore part of the neck; the

basal part of the secondaries white; the chest and upper breast pale grey, most of the feathers, except those in the centre, with a black spot on either margin, and the outer tail-feathers black, slightly tipped with rufous, mottled with black. Total length 24 inches, wing 11·5, tail 7·5, tarsus 2·6.

Adult female. Differs from the male in having some of the grey feathers on the sides of the throat and all the feathers of the chest mottled with buff. Total length 23 inches, wing 11, tail 6·9, tarsus 2·3.

In a *younger specimen*, with the outer primaries pointed, the lower part of the chest differs from that of both the adult birds, many of the feathers are white, and the rest are slightly mottled with grey.

Hab. Mountains of Asia Minor, ranging west to the Gök Mountains, east to Transcaspia, north to the Caucasus, and south to the higher ranges near Shiraz, S. Persia.

a, *b*. ♂ ♀ ad. sk.	Taurus Mountains, April (*C. G. Danford*).	Tweeddale Coll.
c. Imm. sk.	Kurdistan.	Sir A. H. Layard [P.].
d. ♂ ad. skeleton.	Taurus.	C. G. Danford, Esq. [P.].

5. Tetraogallus caucasicus.

Tetrao caucasica, *Pall. Zoogr. Ross.-As.* ii. pp. 76, 87 (note), pl. (1811).

Chourtka alpina, *Motschoulski, Bull. Soc. Mosc.* no. i. p. 95, pls. viii., viii. bis, & xi. (1839).

Perdix (Megaloperdix) caucasica, *Brandt, Bull. Ac. St. Pétersb.* viii. p. 190 (1841), i. p. 281 (1843), iii. p. 189 (1845).

Tetraogallus caspius, *Gould, B. Asia*, vii. part text to pl. 29 (1853); *Gray, List Gallinæ Brit. Mus.* p. 82 (1867) [part.].

Oreotetrax caucasica, *Radde, J. f. O.* 1876, p. 216.

Tetraogallus caucasicus, *March. Rev. Zool.* 1877, p. 354, pl. 133; *Seebohm, Ibis*, 1883, p. 27.

Megaloperdix caucasica, *Bogd. B. Caucas.* p. 140 (1879); *id. Consp. Av. Imp. Ross.* fasc. i. p. 38 (1884); *Radde, Orn. Caucas.* p. 335, pl. xxi. figs. 1 & 2 (1884); *id. J. f. O.* 1885, p. 79.

Megalloperdix caucasica, *Lorenz, Beitr. Orn. Kaukas.* p. 55 (1887).

Adult male and female. Resembles *T. caspius* in general plumage, but the back of the head and nape are rusty red. The whole mantle is barred and vermiculated with black and buff; the lower part of the cheek and the band down the sides of the throat dull chocolate. The feathers of the chest are blackish grey, margined all round and vermiculated and irregularly barred with buff. Total length 21 inches, wing 10·8, tail 6·8, tarsus 2·4.

In a *younger male* the band down the sides of the throat is dark grey; and in a still younger example the feathers of these parts are blackish, barred and edged with buff, like those of the chest.

Hab. Caucasus Mountains.

a. ♂ imm. sk.	Terscha-Oblast, N. Caucasus, Jan. (*Lorenz*).	Purchased.

6. Tetraogallus altaicus.

Perdix altaicus, *Gebler*, *Bull. Sci. Acad. St. Pétersb.* i. p. 31 (1837), iv. p. 30 (1840) [Altai].
Perdix (Megaloperdix) altaica, *Brandt*, *Bull. Acad. St. Pétersb.* viii. p. 190 (1840), i. p. 282 (1843), iii. p. 188 (1845).
Tetraogallus altaicus, *Gray*, *P. Z. S.* 1842, p. 105; *id. List of B.* pt. iii. *Gall.* p. 30 (1844); *Gould*, *B. Asia*, vii. pl. 31 [text] (1853); *Gray*, *List Gallinæ Brit. Mus.* p. 83 (1867); *id. Hand-l. B.* ii. p. 275 (1870); *Finsch*, *Verh. Ges. Wien*, xxix. p. 240 (1880).
Megaloperdix altaica, *Radde*, *Reis. Ost-Sib.* ii. p. 304 (1863); *Tacz. J. f. O.* 1873, p. 98; *Boyd. Consp. Av. Imp. Ross.* fasc. i. p. 39 (1884).
Oreotetrax altaica, *Radde*, *J. f. O.* 1876, p. 218.

Adult male and female. Differ from *T. caspius* in having the sides of the neck and the mantle grey, like the top of the head, the latter rather paler on the lower parts and separated from the rest of the back by a blackish band; the rest of the upper parts darker, and the edges of the wing-coverts and feathers of the lower back and rump margined with white, never chestnut; no white on the basal part of the secondaries; the chin and middle of the throat and neck white, the lateral feathers of the two latter with black shafts and terminal black dots; the feathers of the lower part of the chest with a pair of white terminal spots, one on each side of the shaft, and edged internally with black; the breast and sides white, the belly white mixed with blackish grey; the flanks and thighs blackish, finely vermiculated here and there with buff. The primaries with much less white on the basal parts, and the outer tail-feathers grey, blackish towards the extremity, and shading into whitish on the basal part of the inner webs. Bill blackish; legs and feet orange (in skin). Total length 23 inches, wing 10·9, tail 6·8, tarsus 2·4.

A *younger male* with the outer primaries pointed does not otherwise differ in plumage from the adult.

Hab. Altai ranges.

a. ♂ vix ad. sk.	Altai Mountains, April.	Mr. Brandt.
b. [♀] ad. sk.	Altai Mountains (*Kibort*).	St. Petersburg Museum [E.].

4. CACCABIS.

	Type.
Caccabis, *Kaup*, *Natürl. Syst.* p. 183 (1829)	C. saxatilis.
Alectoris, *Kaup*, *Natürl. Syst.* p. 180 (1829)	C. petrosa.
Chacura, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844)	C. chukar.
Pyctes, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844).....	C. chukar.

Sexes similar.

Tail with 14 feathers; somewhat rounded, and $\frac{5}{8}$ of the length of the wing.

1st primary about equal to 6th; 3rd slightly longest.

The subterminal part of the outer webs of the primaries buff.

Sides and flanks barred, in marked contrast to the rest of the underparts.

Range. Palæarctic region: from the Canaries to China, and from Mongolia to S. Arabia.

Key to the Species.

I. Outer tail-feathers dark chestnut.
  A. Top of the head not dark chestnut; outer scapulars margined with vinaceous or dirty grey.
    a. A black band surrounds the throat.
      a'. Feathers of the chest uniform (isabelline grey), not margined on the sides with black; belly pale rufous buff.
        a''. Lores black; ear-coverts black mixed with buff ..... *saxatilis* ♂ & ♀, p. 111.
        b''. Lores white; ear-coverts chestnut . *chukar* ♂ & ♀, p. 113.
      b'. Feathers of the chest widely margined on the sides with black; belly bright rufous buff ..... *rufa* ♂ & ♀, p. 118.
    b. Band round the throat double, on the inside black, on the outside reddish brown. *magna* ♂ & ♀, p. 120.
  B. Top of the head dark chestnut; a chestnut collar surrounds the neck, spotted, especially on the sides, with white; outer scapulars with rufous-chestnut borders .... *petrosa* ♂ & ♀, p. 120.
II. Outer tail-feathers grey; top of the head black; a wide black band surrounds the throat, and is continued down the middle of the neck ..... *melanocephala* ♂ & ♀, [p. 122.

1. Caccabis saxatilis.

La Bartavelle, *D'Aubent. Pl. Enl.* ii. pl. 39. no. 231; *Buff. Hist. Nat. Ois.* ii. p. 420 (1771) [part.].

Greek Partridge, *Lath. Gen. Syn.* ii. pt. ii. p. 763 (1783).

Perdix rufa, *Lath. Ind. Orn.* ii. p. 647 (1790); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 194 (1817); *id. Tabl. Encycl. Méth.* i. p. 206, pl. 92. fig. 4 (1823).

Perdix saxatilis, *Wolf & Meyer, Hist. Nat. Ois. l'Allem.* p. 87, pl. 48 (1805); *Meyer & Wolf, Tasch. Deuts.* i. p. 305, pl. (1810); *Temm. Pig. et Gall.* iii. pp. 349, 725 (1815); *id. Man. d'Orn.* ii. p. 484 (1820); *Vieill. Faun. Franç.* p. 252, pl. 109. fig. 5 (1828); *Roux, Orn. Prov.* ii. p. 41, pl. 259 (1830); *Brehm, Handb. Vög. Deutschl.* p. 523 (1831); *Ménétr. Cat. Rais.* p. 47 (1832); *Schinz, Nat. Abbild. Vög.* p. 270 (1833); *Naum. Nat. Vög. Deutschl.* vi. p. 546, pl. 164 (1833); *Schinz, Faun. Helvét.* p. 99 (1837); *Gould, B. Europe*, iv. text to pl. 261. fig. 2 (1837); *Crespon, Orn. Gard*, p. 330 (1840); *Schinz, Europ. Faun.* i. p. 288 (1840); *Bout. Orn. Dauphiné*, p. 63, pl. 42. fig. 2 (1843); *Malherbe, Faun. Orn. Sicil.* p. 152 (1843); *Schinz, Nat. Vögel*, p. 163, pl. 79 (1853); *Bonap. J. f. O.* 1858, p. 30; *Companyo, Hist. Nat. Pyrén.* iii. p. 202 (1863); *Jaubert & Lapomm. Rich. Orn.* p. 417 (1859); *Bettoni, Ucc. Lombard.* ii. pl. 94 [text] (1868); *id. Ucc. Lombard.* ii. fasc. xxxiv. t. 95 (1870); *Danf. & Brown, Ibis*, 1875, p. 417 [Transylvania];

Gigl. Ibis, 1881, p. 207 [Dalmatia]; *id. Icon. Av. Ital.* pl. 252 (1881); *D.-Torre u. Tschusi, Ornis*, 1885, p. 493, 1887, p. 280, 1888, p. 249, 1890, p. 137 [Eastern Hungary]; *Gigl. Avif. Ital.* p. 339 (1886); *Olphe-Galliard, Faun. Orn. Europe Occ.* fasc. xxxix. p. 13 (1886); *Cab. J. f. O.* 1887, p. 568, 1888, p. 528; *D.-Torre u. Tschusi, Ornis*, 1888, *Suppl.* p. 260; *Gigl. Avif. Ital.* i. p. 522 (1889), ii. p. 658 (1890), iii. p. 515 (1891).

Perdix græca, *Steph. in Shaw's Gen. Zool.* xi. p. 346 (1819); *Bonap. Icon. Faun. Ital.* i. fasc. iv. pl. 39 (1834); *Keysl. u. Blas. Wirbelth. Europa's*, p. 202 (1840); *Benoit, Orn. Sicil.* p. 119 (1840); *Degl. Orn. Europ.* ii. p. 51 (1849); *Linderm. Vög. Griechenl.* p. 124 (1860) [part.]; *Degl. & Gerbe, Orn. Europ.* ii. p. 64 (1867); *Fritsch, Nat. Vög. Europa*, p. 283 (1870), pl. xxix. fig. 7 (1871); *Cab. J. f. O.* 1882, p. 90.

Red Partridge, *Lath. Gen. Hist.* viii. p. 289 (1823).

Perdix rupestris, *Brehm, Handb. Vög. Deutschl.* p. 522 (1831).

Caccabis græca, *Gray, Gen. B.* iii. p. 508 (1846); *Elwes & Buckl. Ibis*, 1870, p. 328 [Macedonia]; *Olphe-Galliard, Faun. Orn. Europe Occ.* fasc. xxxix. p. 13 (1886).

Caccabis saxatilis, *Gray, List Gallinæ Brit. Mus.* p. 80 (1867); *id. Hand-l. B.* ii. p. 274 (1870); *Saunders, Ibis*, 1871, p. 223; *Lilford, Ibis*, 1875, pp. 8, 9 [Pyrenees & Maritime Alps]; *Dress B. Europe*, vii. p. 93, pl. 470 (1875); *Salvad. El. Ucc. Ital.* p. 199 (1887); *Wilson, Ibis*, 1887, p. 150 [Switzerland]; *Saunders, Ibis*, 1891, p. 186.

Adult male and female. Resemble *C. chukar*, the only tangible differences being that in the present species the lores are black instead of white (though it must be remarked that in some specimens of *C. chukar* the small spot of black feathers is sometimes present below the nasal opening), and the ear-coverts are a mixture of black and buff instead of chestnut. The throat-space circumscribed by the black band is pure white, while as a rule in *C. chukar* it is more or less suffused with buff.

Male. Total length 15 inches, wing 6·6, tail 3·6, tarsus 1·8.

Female. Total length 13·6 inches, wing 6·2, tail 3·4, tarsus 1·7.

Hab. Mountains of Europe: Eastern Pyrenees, Alps, Carpathians, Apennines, and Balkans, also Sicily. [It is doubtful if this bird is the species found in Greece.]

a, *b*. ♂ ♀ ad. sk.	Valais, Switzerland, Jan.	Dr. C. Moesch [C.].
c. ♀ ad. sk.	Ursern, Switzerland.	Tweeddale Coll.
d. ♀ ad. sk.	[Constantinople] (*Deyrolle*).	Riocour Coll.
e. ♂ ad. sk.	[Algeria] Spring (*Loche*).	Riocour Coll.

Hybrid between Caccabis saxatilis *and* C. petrosa.

Perdix saxatilis × P. petrosa, *Olphe-Gall. Bull. Soc. Orn. Suisse*, 1865, p. 69, *and Rev. Zool.* 1866, p. 78.

Hybrid between Caccabis saxatilis *and* C. rufa.

Perdix labatei, *Bouteille, Orn. Dauphiné*, ii. p. 337, pl. 72. fig. 5 (1843); *Olphe-Galliard, Faun. Orn. Europe Occ.* fasc. xxxix. pp. 8 & 8 bis, with pl. (1886).

Subsp. *a.* Caccabis chukar.

Perdix rufa, *Gm.* (*nec Linn.*) *Nov. Com. Acad. Petr.* xv. p. 443 (1771).
La Bartavelle ou Perdix Grecque, *Buff. Hist. Nat. Ois.* ii. p. 420 (1771) (part.).
? Tetrao kakelik, *Falck, Beitr. Kennt. Russ. Reichs*, iii. p. 390 (1786); *Gm. S. N.* i. pt. ii. p. 760 (1788).
? Perdix kakelik, *Lath. Ind. Orn.* ii. p. 655 (1790); *Bonnat. Tabl. Encycl. Méth.* i. p. 214 (1791); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 226 (1817).
? Kakelik Partridge, *Lath. Gen. Syn. Suppl.* ii. p. 282 (1802); *id. Gen. Hist.* viii. p. 290 (1823).
Tetrao rufa, *Pall. Zoogr. Ross.-As.* ii. p. 79 (1811).
Red Billed Partridge, *Lath. Gen. Hist.* viii. p. 298 (1823).
Perdix saxatilis, *Wern.* (*nec Wolf & Meyer*) *Atl. Orn. d'Eur.* ord. 10, pl. 16 (1828); *Rüpp. N. Wirbelth., Vög.* p. 10 (1835) [Sinai]; *Gould, B. Europe*, iv. pl. 261. fig. 2 (1837); *Dicks. & Ross, P. Z. S.* 1839, p. 133 [Erzeroom].
Perdix chucar, *Gray, Ill. Ind. Zool.* i. pl. 54 (1830–32); *Gould, Cent. B. Himal.* pl. 71 [text] (1832); *Jard. Nat. Lib., Orn.* iv. p. 107, pl. v. (1834); *Filippi, Viag. Pers.* i. p. 351 (1865); *Degl. & Gerbe, Orn. Europ.* ii. p. 67 (1867); *Severtz. J. f. O.* 1875, p. 181 [Turkestan]; *Bogd. B. Caucas.* p. 139 (1879); *Müll. J. f. O.* 1879, p. 391 [Cyprus]; *Seebohm, Ibis*, 1883, p. 26 [Caucasus]; *Bogd. Consp. Av. Imp. Ross.* fasc. i. p. 40 (1884); *Lorenz, Beitr. Orn. Kaukas.* p. 55 (1887); *Zaroud. Bull. Mosc.* lxi. p. 323 (1885) [Transcaspia]; *id. l. c.* n. s. iii. p. 109 (1890).
Chacura pugnax, *Hodgs. Madr. Journ.* 1837, p. 505.
Caccabis saxatilis, *Démid. Voy. Russ. Mérid.* iii. p. 220 (1840); *Tristram, Ibis*, 1859, p. 35 [S. Palestine]; *id. P. Z. S.* 1864, p. 449; *id. Ibis*, 1868, p. 213 [Palestine]; *Wyatt, Ibis*, 1870, p. 16 [Sinai]; *id. Mamm. & Avif. Sinai*, pl. xx. (1873); *Salvin, Cat. Strickl. Coll.* p. 570 (1882) [Smyrna]; *Radde, Orn. Caucas.* p. 348 (1884); *id. Ornis*, 1887, p. 495 [Samur R.]; *Radde & Walt. Ornis*, 1889, pp. 86, 179 [Transcaspia].
Caccabis chukar, *Gray, List of B.* pt. iii. *Gall.* p. 36 (1844); *id. Cat. Hodgs.* ed. i. p. 127 (1846); *id. Gen. B.* iii. p. 508 (1846); *Adams, P. Z. S.* 1858, p. 502 [W. Himalayas & Punjab], 1859, p. 185 [Cashmere, Ladák]; *Irby, Ibis*, 1861, p. 236 [Kumaon]; *Swinh. Ibis*, 1865, p. 353 [Chefoo]; *Gray, List Gallinæ Brit. Mus.* p. 80 (1867); *Tytler, Ibis*, 1868, p. 203 [Mussooree]; *v. Pelz. Ibis*, 1868, p. 321 [Koteghur]; *Beavan, Ibis*, 1868, p. 384 [Simla]; *Brooks, Ibis*, 1869, p. 60 [Almorah]; *Melliss, Ibis*, 1870, p. 102 [St. Helena]; *Swinh. P. Z. S.* 1870, pp. 439, 447 [Pekin & Kalgan]; *Gray, Hand-l. B.* ii. p. 274 (1870); *Hume, Nests & Eggs Ind. B.* p. 539 (1873); *id. Str. F.* i. p. 226 (1873) [Sindh]; *Cock & Marsh. Str. F.* i. p. 358 (1873) [Muree]; *Heugl. J. f. O.* 1874, p. 399 [N. China]; *Dress. B. Europe*, vii. p. 97 (1875); *Swinh. Ibis*, 1875, p. 126 [Chefoo]; *Ball, Str. F.* iii. p. 208 (1875) [Suliman Hills]; *Blanf. E. Pers.* ii. p. 275 (1876) [Baluchistan & Shiraz Dist.]; *Dress. Ibis*, 1876, p. 323; *David & Oustal. Ois. Chine*, p. 395 (1877) [Mongolia & N.E. China]; *Prjevalsky, Mongolia*, ii. p. 126 (1876); *id. in Rowl. Orn. Misc.* ii. pp. 425, 426 (1877) [Kalgan, Mongolia, Kansu]; *Danf. Ibis*, 1878, p. 28 [Taurus]; *Butl. Cat. B. Sind*, p. 54 (1879); *Scully, Str. F.* viii. pp. 348, 366, 367 (1879) [Valley of Nepal]; *Barnes, Str. F.* ix. pp. 219, 458 (1880) [Chaman]; *Biddulph, Str. F.* ix. p. 358 (1880) [Gilgit]; *Wardlaw Ramsay, Ibis*, 1880, p. 70 [Kurrum Valley]; *Biddulph, Ibis*, 1881,

p. 93; *Scully, Ibis*, 1881, p. 586; *id. Str. F.* x. p. 139 (1881) [Gilgit]; *Oustalet, Ann. Sci. Nat., Zool.* xiii. art. no. 7, p. 4 (1882); *Swinhoe, Ibis*, 1882, p. 119 [S. Afghanistan]; *Severtz. Ibis*, 1883, pp. 80, 82 [Pamir Range]; *Tristr. Palest.* p. 123 (1884); *Olphe-Galliard, Faun. Orn. Europe Occ.* fasc. xxxix. p. 15 (1886); *Sharpe, Ibis*, 1886, p. 498 [Bushire]; *Pleske, Mém. Ac. St. Pétersb.* (7) xxxvi. no. 3, p. 47 (1888); *Guillem. Ibis*, 1888, pp. 96, 106 [Cyprus]; *St. John, Ibis*, 1889, p. 175 [Quetta]; *Lilford, Ibis*, 1889, pp. 333, 334 [Cyprus]; *Hart, Faun. Flor. Sinai*, p. 225 (1891); *Barnes, Ibis*, 1893, p. 166 [Aden].

Pyctes (Chacura) chukor, *Hodgs. Gray's Zool. Misc.* p. 85 (1844); *id. Icon. ined. in Brit. Mus.* no. 110.

Caccabis græca, *Gray, List of B.* pt. iii. *Gall.* p. 36 (1844); *id. List Gallinæ Brit. Mus.* p. 80 (1867); *id. Hand-l. B.* ii. p. 274 (1870); *Elwes & Buckl. Ibis*, 1870, p. 328 [Imbros & Lemnos].

Chacura græca, var., *Rüpp. Vög. N.O.-Afr.* p. 106, no. 376 (1845).

Perdix græca, *Evers. J. f. O.* 1853, p. 292 [Altai]; *Bonap. J. f. O.* 1858, p. 31; *Linderm. Vög. Griechenl.* p. 124 (1860) [part.]; *Powys, Ibis*, 1860, p. 238 [Ionian Is.]; *Sperling, Ibis*, 1864, p. 285 [part., Ionian Is.]; *Bree, B. Eur.* iii. p. 242, pl. (1867).

Chacura chukar, *Heugl. Vög. N.O.-Afr.* p. 50, no. 523 (1856).

Perdix synaica, *Bonap. C. R.* xlii. p. 882 (1856).

Perdix altaica, *Bonap. C. R.* xlii. p. 882 (1856).

Perdix chukart, *Bonap. J. f. O.* 1858, p. 31.

Perdix sinaica, *Bonap. J. f. O.* 1858, p. 31.

Chacura sinaitica, *Heugl. J. f. O.* 1862, p. 410.

Caccabis chukor, *Jerd. B. Ind.* iii. p. 564 (1863); *Hume & Marsh. Game B. Ind.* ii. p. 34, pl. (1879); *Marshall, Ibis*, 1884, p. 423 [Chamba]; *Sharpe, Tr. Linn. Soc.* (2) *Zool.* v. pt. 3, p. 87 (1889); *Oates, ed. Hume's Nests & Eggs Ind. B.* iii. p. 431 (1890); *Sharpe, Second Yark. Miss., Aves*, p. 121 (1891).

Perdix græca, var., *Bree, B. Eur.* iii. p. 244, pl. (1867).

Caccabis altaica, *Gray, List Gallinæ Brit. Mus.* p. 80 (1867); *id. Hand-l. B.* ii. p. 274 (1870).

Chacura græca sinaitica, *Heugl. Peterm. Geogr. Mitth.* 1869, p. 417.

? Chacura græca similis, *Heugl. Peterm. Geogr. Mitth.* 1869, p. 419.

Perdix chuchar, *David, N. Arch. Mus. Bull.* vii. p. 11 (1871) [Pekin, Sze-chuen].

Caccabis chukar, var. pubescens, *Swinh. P. Z. S.* 1871, p. 400 [N. China to the Yangtze].

Caccabis sinaica, *Heugl. Orn. N.O.-Afr.* iii. p. 916 (1873).

Caccabis arenarius, *Hend. & Hume, Lahore to Yark.* pp. 283, 284 (1873); *Salvad. El. Ucc. Ital.* p. 199 (1887).

Caccabis pallescens, *Hend. & Hume, Lahore to Yark.* p. 283 (1873); *Scully, Str. F.* iv. p. 182 (1876) [Kashgar & Yarkand].

Caccabis pallidus, *Hend. & Hume, Lahore to Yark.* p. 284 (1873); *Forsyth, P. Z. S.* 1874, p. 324 [Kashgar]; *Scully, Str. F.* iv. p. 183 (1876) [Hills S. of Kashgar]; *Sharpe, Second Yark. Miss., Aves*, p. 121 (1891).

Perdix græca s. saxatilis, *Krüp. J. f. O.* 1875, p. 282 [Smyrna].

Perdix chucor, *Finsch, Verh. Ges. Wien*, xxix. p. 240 (1880) [Saisan].

Caccabis hyemalis, *Severtz. Ibis*, 1883, p. 80 [Pamir Range].

Caccabis sinaitica, *Kaiser, Ornis*, 1890, p. 521.

Perdix saxatilis chukar, *Hartert, Kat. Mus. Senckenb.* p. 194 (1891).

After a careful examination of a very large series of birds ranging from the Grecian Archipelago to Kalgan in the north of China,

I am satisfied that it is impossible to distinguish more than one subspecies of *C. saxatilis*, and that all the paler and darker races, which from time to time have been elevated to the rank of species under a number of names, are merely climatic variations of one and the same bird.

The range of this subspecies is very extensive and varied, for it is found in localities from sea-level to an elevation of at least 16,000 feet, and apparently flourishes quite as well in the most desert country as it does in the well-watered and cultivated hills. It is scarcely surprising that these physical surroundings should largely affect the Chukar, both in size and colour, but between the extremes of size and colour it is easy to select from the series of specimens before me a number of birds showing a complete gradation between the two.

The lightest coloured bird in the whole of our series is from Bushire, while somewhat darker specimens come from Bagdad, Shiraz, Afghanistan, Sindh, Ladak, &c., and the darkest are from the Grecian islands, Cyprus, Asia Minor, and the Himalayas, and other parts where the vegetation is plentiful. Chinese specimens from Kalgan and the Nankow Pass have the upper parts of the body of a more reddish tint (*pubescens*, Swinhoe), but they scarcely differ from the paler forms from Khusan, N. Afghanistan, and several other localities.

Adult male and female. Forehead and sides of the head grey, shading into dull vinous in the middle and on the nape; back and sides of the neck and upper part of the mantle usually grey or brownish grey, shading into dull vinous on the lower part of the mantle, and to greyish drab or grey on the lower back, rump, and upper tail-coverts. The inner and longer scapulars and wing-coverts are greyish drab; the outer scapulars are bluish grey, widely margined all round with dull vinaceous red. Quills brown, the subterminal part of the outer web of the primaries (except the first) and of the inner secondaries buff. A black band across the front of the forehead passes backwards on either side to the eye, behind which it is continued down the sides of the throat, meeting its fellow on the front of the neck; a black patch on the chin and at either angle of the gape; ear-coverts chestnut; superciliary stripe, which commences above the eye, lores, cheeks, and throat white or whitish buff. Chest and breast grey, washed more or less with isabelline and vinous on the sides. Belly, vent, and under tail-coverts bright buff. Feathers of the sides and flanks grey at the base, buff in the middle, and dark chestnut at the extremity, the colours being divided from one another by two transverse black bars. Two middle pairs of tail-feathers drab-grey; outer pairs the same, but with the terminal half dark chestnut. Iris yellow, orange, or reddish brown. Bill crimson to coral-red, often dusky on the culmen. Legs and feet coral-pink to deep red. The tarsus is generally provided with a stout, short, knob-like spur in the male.

Male. Total length 14·6 inches, wing 6·7, tail 3·9, tarsus 1·9.

Female. Total length 13·4 inches, wing 6·5, tail 3·8, tarsus 1·8.

The above description and measurements are taken from Hima-

layan specimens; the desert varieties have the upper parts washed with different shades of isabelline and the underparts paler.

Younger specimens which have not quite completed their first moult still retain some of the outer secondaries and primaries of the first plumage; these have the outer webs irregularly notched with buff, edged with black, and are minutely dotted with the latter colour; otherwise the plumage is similar to that of the adult. Bill brownish black. Legs and feet orange-red.

A *quite young bird* has the general colour of the upper parts sandy brown, the mantle and wing-coverts have a buff spot at the extremity of each feather, and the outer webs of the quills are notched and mottled with buff. The tail is sandy, finely mottled with buff and dusky. The underparts are whitish, most of the chest- and breast-feathers with paler spots at the extremities of the shafts.

Hab. Ranging in the west to the Ionian Islands [and perhaps found on the mainland of Greece], in the east to China, in the north to Mongolia and Turkestan, and in the south to the Persian Gulf and apparently to Aden (*C. arenarius*, Hume). Island of St. Helena [introduced].

a. Ad. sk.	Zante, Ionian Islands.	Sir Charles Fellowes [P.].
b, *c*. Ad. sk.	Grecian Archipelago.	Gould Coll.
d–*h*. ♂ ♀ ad. sk.	Cyprus, April, May, Nov.	Lord Lilford [P.].
i, *k*. ♂ ♀ ad. st.	El Busrah, Palestine.	Canon Tristram [C.].
l. Imm. sk. [var.].	Smyrna, Asia Minor.	R. Cumberbatch, Esq. [P.].
m. ♂ ad. sk.	Anasha, Taurus, Asia Minor, March (*C. G. Danford*).	Salvin-Godman Coll.
n. Ad. sk.	Hassan Chouslar, Anatolia, Jan. (*C. G. Danford*).	Salvin-Godman Coll.
o. ♀ ad. sk.	Erzeroom, Turkey in Asia, Sept. (*Dickson & Ross*).	Gould Coll.
p, *q*. Ad. sk.	Bagdad.	Sir Kenneth Loftus [P.].
r. Ad. sk.	Kirrind, Persia, June.	Sir Kenneth Loftus [P.].
s. Juv. sk.	Mungerrah, Persia.	Sir Kenneth Loftus [P.].
t, *u*. ♀ ad. et juv. sk.	North of Shiraz, S. Persia, July.	W. T. Blanford, Esq. [P.].
v. Ad. sk.	Bushire, Persian Gulf, Feb.	A. J. V. Palmer, Esq. [P.].
w. Ad. sk.	Muscat, Arabia.	W. T. Blanford, Esq. [P.].
x–*a'*. ♂ ♀ ad. sk.	Near Quettah (*W. Griffith*).	India Museum [P.].
b'. ♂ ad. sk.	Bala Murghab, Afghanistan, Dec. (*J. Aitchison*).	Afghan Boundary Comm. [P.].
c', *d'*. ♂ ♀ ad. sk.	Khusan, Nov. (*J. Aitchison*).	Afghan Boundary Comm. [P.].
e'. Ad. sk.	Khelât, Baluchistan, Nov. (*Capt. Malden*).	Hume Coll.
f'. ♂ ad. sk.	Low hills below Duryale, N. Sindh, Jan. (*A. O. H.*).	Hume Coll.

♂ ad. st.	Himalayas.	
h'. Ad. sk.	Himalayas.	R. M. Ferguson, Esq. [P.].
i'. Ad. sk.	Himalayas.	Gould Coll.
k', *l'*. ♂ ad. sk.	Murdan, Feb. (*J. R. Johnson*).	Hume Coll.
m'–*u'*. ♂ ad. sk.	Koteghur, Feb., March, Oct.	Hume Coll.
v'–*x'*. ♂ ad. sk.	Simla, Oct. (*A. O. H.*).	Hume Coll.
y'. ♂ ad. sk.	Solon near Kussowlee, Nov. (*A. O. H.*).	Hume Coll.
z'–*e''*. ♂ ♀ ad. sk.	Bussahir, Jan., Feb.	Hume Coll.
f'', *g''*. Ad. sk.	Hills north of Mussooree (*Wilson*).	Hume Coll.
h''–*k''*. ♂ ♀ ad. sk.	Bhagarati Valley.	Hume Coll.
l''–*n''*. Ad. sk.	Kumaon (*Capt. Strachey*).	India Museum [P.].
o'', *p''*. Ad. sk.	Almora, Oct.	Hume Coll.
q''–*w''*. Ad. et pull. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
x''. ♀ ad. sk.	Nepal Valley, May (*J. Scully*).	Hume Coll.
y'', *z''*. Ad. sk.	Darjeeling, March.	India Museum [P.].
*a*³. Ad. sk.	Thibet?	Lord Gifford [P.].
*b*³. ♀ ad. sk.	Ak Musjia, Cashmere, June (*J. Biddulph*).	Hume Coll.
*c*³. ♀ ad. sk.	Boonji, Cashmere, Jan. (*J. Biddulph*).	Hume Coll.
*d*³–*i*³. ♂ ♀ ad. et imm. sk.	Ladak (*Capt. Strachey*).	India Museum [P.].
*k*³. Ad. sk.	Ladak, Sept. (*F. Stoliczka*).	India Museum [P.].
*l*³. ♂ ad. sk.	Karbu, Ladak, June (*G. Henderson*). (Type of *Caccabis pallescens*, Hume.)	Hume Coll.
*m*³. Ad. sk.	Lamaguru, Aug. (*F. Stoliczka*).	India Museum [P.].
*n*³. ♀ ad. sk.	Karakash, Aug. (*G. Henderson*) (Type of *Caccabis pallidus*, Hume.)	Hume Coll.
*o*³. Juv. sk.	Arpalak River, Aug. (*G. Henderson*).	Hume Coll.
*p*³. ♂ ad. sk.	Yarkand, March (*J. Scully*).	Hume Coll.
*q*³. ♀ ad. sk.	Yarkand (*J. Biddulph*).	Hume Coll.
*r*³. Ad. sk.	Kangan, Aug. (*F. Stoliczka*).	India Museum [P.].
*s*³. Ad. sk.	Jungalik, April (*F. Stoliczka*).	India Museum [P.].
*t*³. Ad. sk.	Chehil Gombaz, March (*F. Stoliczka*).	India Museum [P.].
*u*³. Ad. sk.	Kiwaz, Oct. (*Col. Gordon*).	India Museum [P.].
*v*³, *w*³. Ad. sk.	N. of the Little Alai Mountains.	St. George Littledale, Esq. [P.].
*x*³, *y*³. Ad. sk.	South Muzart, Aug.	Rev. Dr. Lansdell [P.].
*z*³. ♀ ad. sk.	Saisan Turkestan, May.	Dr. Hachloff [C.].
*a*⁴, *b*⁴. Ad. sk.	Saiar Mountains, Altai.	St. George Littledale, Esq. [P.].
*c*⁴–*e*⁴. Imm. sk.	Altai Mountains.	Gould Coll.
*f*⁴. Ad. sk.	China.	Gould Coll.
*g*⁴. Ad. sk.	Nankow Pass, Sept. (*R. Swinhoe*).	Hume Coll.
*h*⁴, *i*⁴. Ad. sk.	Kalgan.	Gould Coll.
*k*⁴. Juv. sk.	Central Asia.	
*l*⁴. Skeleton		

2. Caccabis rufa.

Red-legg'd Partridge (Perdix ruffa), *Albin, Nat. Hist. B.* i. p. 27, pl. xxix. (1738).

Tetrao rufus, *Linn. S. N.* i. p. 276 (1766); *Gm. S. N.* i. pt. ii. p. 756 (1788); *Bechst. Nat. Deutschl.* iii. p. 519 (1793); *Hayes, Österl. Menag.* pl. 69 [text] (1794); *Brokhausen, Teutsche Orn.* 1st livr. pl. 103 [with text] (1800).

La Perdrix rouge d'Europe, *D'Aubent. Pl. Enl.* ii. pl. 44. no. 150; *Buff. Hist. Nat. Ois.* ii. p. 431, pl. xv. (1771).

La Perdrix rouge-blanche, *Buff. Hist. Nat. Ois.* ii. p. 437 (1771).

Guernsey Partridge, *Lath. Gen. Syn.* ii. pt. ii. p. 768 (1783); *Suppl.* i. p. 220 (1787); *id. Gen. Hist.* viii. p. 291 (1823).

Perdix rubra, *Temm. Pig. et Gall.* iii. pp. 361, 726 (1815); *id. Man. d'Orn.* ii. p. 485 (1820); *Vieill. Tabl. Encycl. Méth.* i. p. 206 (1823); *Wern. Atl. Orn. d'Eur.* ord. 10, pl. 17 (1828); *Millet, F. Maine et Loire*, ii. p. 389 (1828); *Roux, Orn. Prov.* ii. p. 38, pls. 257, 258 (1830); *Brehm, Handb. Vög. Deutschl.* p. 523 (1831); *Naum. Nat. Vög. Deutschl.* vi. p. 563, pl. 165 (1833); *Schinz, Nat. Abbild. Vög.* p. 271 (1833); *St.-Hilaire, Exp. Morée*, iii. p. 54 (1833); *Gould, B. Europe*, iv. pl. 260 [text] (1837); *Macgill. Brit. B.* i. p. 215 (1837); *Schinz, Europ. Faun.* i. p. 288 (1840); *Keys. & Blas. Wirbelth. Europa's*, p. 202 (1840); *Crespon, Orn. Gard*, p. 331 (1840); *Malherbe, Faun. Orn. Sicil.* p. 153 (1843); *Bout. Orn. Dauphiné*, p. 65, pl. 42. fig. 3 (1843); *Degl. Orn. Europ.* ii. p. 53 (1849); *Schinz, Nat. Vögel*, p. 164, pl. 79 (1853); *Harc. Ann. Mag. N. H.* (2) xv. p. 437 (1855) [Madeira]; *Jaubert et Lapomm. Rich. Orn.* p. 418 (1859); *Drouët, Faun. Açoréenne*, p. 123 (1861); *Bert. Cat. An. l'Yonne*, p. 59 (1864); *Degl. & Gerbe, Orn. Europ.* ii. p. 69 (1867); *Fritsch, Nat. Vög. Europa*, p. 285 (1870), pl. xxix. fig. 9 (1871); *Rey, J. f. O.* 1872, p. 154 [Portugal]; *Fallon, Ois. Belg.* p. 137 (1875); *Jesse, Ibis*, 1876, p. 382 [Corsica]; *Giglioli, Ibis*, 1881, p. 207 [N. & Cent. Apennines, Elba, & Montecristo].

Perdix rufa, *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 229 (1817); *Steph. in Shaw's Gen. Zool.* xi. p. 347 (1819); *Vieill. Faun. Franç.* p. 251, pl. 109. figs. 1, 2 (1828); *Less. Traité d'Orn.* p. 506, pl. 90. fig. 2 (1831); *Drapiez, Dict. Sci. Nat.* viii. p. 424, pl. fig. 2 (1842); *Yarrell, Hist. Brit. B.* ii. p. 343 (1843); *Smith, Ibis*, 1868, p. 450 [Portugal]; *Wright, Ibis*, 1869, p. 252; *R. Gray, B. West Scot.* p. 243 (1871); *Godman, Ibis*, 1872, p. 219 [Madeira & E. Azores]; *Booth, Rough Notes*, ii. pp. 1–3 (1881–7); *Seebohm, Hist. Brit. B.* ii. p. 457 (1884); *Gigl. Avif. Ital.* p. 338 (1886); *Hartwig, J. f. O.* 1886, p. 483; *Gigl. Avif. Ital.* i. p. 521 (1889), ii. p. 658 (1890), iii. p. 515 (1891); *Koenig, J. f. O.* 1890, p. 288.

Perdix rubra candida, *Naum. Nat. Vög. Deutschl.* vi. p. 567 (1833).

Perdix rubra pallida, *Naum. Nat. Vög. Deutschl.* vi. p. 567 (1833).

Perdix rubra varia, *Naum. Nat. Vög. Deutschl.* vi. p. 566 (1833).

Caccabis rufa, *Gray, List of B.* pt. iii. *Gall.* p. 36 (1844); *id. Gen. B.* iii. p. 508 (1846); *More, Ibis*, 1865, p. 428; *Lilford, Ibis*, 1866, pp. 176, 384 [Spain]; *Godman, Ibis*, 1866, pp. 99, 107 [Azores]; *Gray, List Gallinæ Brit. Mus.* p. 81 (1867); *Godman, Azores*, p. 31 (1870); *Gray, Hand-l. B.* ii. p. 274 (1870); *Saunders, Ibis*, 1871, p. 223 [S. Spain]; *Dress. B. Europe*, vii. p. 103, pl. 471. fig. 1 (1875); *Lilford, Ibis*, 1875, p. 9 [Tuscany]; *Saunders, ed. Yarrell's Brit. B.* iii. p. 115 (1882); *Irby, Ibis*, 1883, p. 185 [N. Spain]; *Saunders, Ibis*, 1884, p. 387 [Pyrenees]; *Whitehead, Ibis*, 1885,

p. 41 [Corsica]; *Olphe-Galliard, Faun. Orn. Europe Occ.* fasc. xxxix. p. 4 (1886); *Salvad. El. Ucc. Ital.* p. 199 (1887); *Backhouse, Ibis*, 1887, p. 73 [E. Pyrenees]; *Tait, Ibis*, 1887, p. 380 [Portugal]; *Reid, Ibis*, 1888, p. 76 [Gran Canary]; *Tristram, Ibis*, 1889, p. 27 [Gran Canary]; *Saunders, Ill. Man. Brit. B.* p. 489 (1889); *Evans, Ibis*, 1891, p. 76; *Saunders, Ibis*, 1891, p. 186; *Waldo, Ibis*, 1893, p. 201 [Gran Canary].

Perdix rufidorsalis, *Brehm, Vogelfang*, p. 266 (1855).

Perdix rubra intercedens, *Brehm, Allg. deutsch. nat. Zeit.* p. 472 (1857).

Perdix rufus, *Fontaine, Faune Luxemb., Ois.* p. 175 (1865).

Cothurnix rubra, *Lemett, Cat. Ois. Seine-Inf.* p. 116 (1871).

Perdix atrorufa, *Vincelot, Essais étym. Maine-et-Loire*, ii. p. 30 (1872); *Olphe-Galliard, Faun. Orn. Europe Occ.* fasc. xxxix. p. 12 (1886).

Perdix xanthopleura, *Vincelot, Essais étym. Maine-et-Loire*, ii. p. 32 (1872); *Olphe-Galliard, Faun. Orn. Europe Occ.* fasc. xxxix. p. 12 (1886).

Caccabis rubra, *Irby, Orn. Gibraltar*, p. 137 (1875); *Wharton, Ibis*, 1876, p. 26 [Corsica].

Caccabis rufa, var. australis, *Tristr. Ibis*, 1889, p. 28 [Gran Canary].

Adult male and female. Differ chiefly from *C. saxatilis* in the following particulars:—The white superciliary stripes commence behind the nostril, and are more or less distinctly joined across the forehead. In addition to the black line which circumscribes the throat, the feathers of the chest and the sides and back of the neck are margined on either side with black, the former very widely, the latter more narrowly. The flank-feathers have the basal part pale grey, followed first by a narrow white, and then a narrow black band, and terminated by a wider one of dark chestnut. The outer tail-feathers are dark chestnut almost to the base. The whole colouring is also somewhat warmer. The male bird is provided with one or sometimes two pairs of blunt wart-like spurs, which are apparently not developed in the female. Naked skin round the eye red. Bill, legs, and feet bright coral-red.

Male. Total length 13·6 inches, wing 6·2, tail 3·7, tarsus 1·7.

Female. Total length 13 inches, wing 6, tail 3·6, tarsus 1·6.

In *younger birds* the black band surrounding the throat is absent, there is a patch of black-edged feathers on the chest, the outer primaries have the subterminal buff part of the outer web toothed with blackish brown, and the outer secondaries are sandy brown with irregular buff black-edged bars. Some of the wing-coverts, too, are sandy brown, blotched on inner web with blackish, and with pale buff patches or stripes down the shaft.

Hab. S.W. Europe: ranging in the north to Belgium and Switzerland, in the south to Madeira, the Azores, and Gran Canary Island, and in the west to South and Central Italy; also to Elba, Corsica, and the Balearic Islands. Great Britain [introduced]. It is not known to occur in N.W. Africa.

a. ♀ ad. sk.	England, Oct.	Hume Coll.
b–e. ♂ ♀ ad. et imm. sk.	Lincolnshire, Sept., Oct.	J. H. Caton Haigh. Esq. [P.].

f. ♀ ad. sk.	Somerleyton, Jan.	Gould Coll.
g. ♂ ad. sk.	Haveningham, Suffolk, Oct.	Shelley Coll.
h–k. ♂ ♀ ad. sk. [var.].	France.	Riocour Coll.
l. ♀ ad. sk.	Le Mans, France, Jan.	Hargitt Coll.
m, n. ♂ ♀ ad. sk.	Montrésor, Nov.	Dr. J. Stolzmann [P.].
o. ♀ ad. sk.	Toulouse, Nov.	Tweeddale Coll.
p. ♂ ad. sk.	Valencia, Spain, Jan. (*H. Saunders*).	Tweeddale Coll.
q, r. ♂ ad. sk.	St. Mary's, Azores, June (*F. D. Godman*).	Salvin-Godman Coll.
s. ♀ ad. sk.	Teneriffe, July.	E. G. B. Meade-Waldo, Esq. [P.].

Hybrid between Caccabis saxatilis *and* C. rufa. *See* p. 112.

3. Caccabis magna.

Caccabis magna, *Prjevalsky, Mongolia*, ii. p. 127 (1876); *id. in Rowley's Orn. Misc.* ii. p. 426 (1877) [Koko-nor, Tsaidam]; *Dedit. J. f. O.* 1886, pp. 531, 534–6.

Adult male and female. Differ from *C. chukar* in their larger size, in having the lores black as in *C. saxatilis*; the collar of the neck double, on the inside blackish or black, on the outside reddish brown and almost the colour of the ear-coverts, and indistinctly marked under the throat; the black stripes on the flanks as narrow as they are in *C. saxatilis*, but the distance between them is as large as in *C. chukar*, and the upper parts of the body paler than in Chinese specimens of *C. chukar*.

Male. Total length 15 inches, wing 7·5–7·7, tail 4–4·15, tarsus 1·6–1·7.

Hab. South Koko-nor Mountains, Northern Thibet, and the Tsaidam plains.

a, b. ♂ ♀ ad. sk.	Koko-nor Mountains, Feb. (*Prjevalsky*).	St. Petersburg Museum [E.].

4. Caccabis petrosa.

Red-legged Partridge from Barbary, *Edw. Nat. Hist. B.* ii. p. 70, pl. 70 (1747).

Perdix rubra barbarica, *Briss. Orn.* i. p. 239 (1760).

La Perdrix de Roche ou de la Gambra, *Buff. Hist. Nat. Ois.* ii. p. 446 (1771).

Barbary Partridge, *Lath. Gen. Syn.* ii. pt. ii. p. 770 (1783): *id. Gen. Hist.* viii. p. 293 (1823).

Tetrao rufus, var. δ, *Gm. S. N.* i. pt. ii. p. 757 (1788).

Tetrao petrosus, *Gm. S. N.* i. pt. ii. p. 758 (1788).

Perdix petrosa, *Lath. Ind. Orn.* ii. p. 648 (1790); *Temm. Pig. et Gall.* iii. pp. 368, 727 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 350 (1819): *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 228 (1817); *Temm. Man. d'Orn.* ii. p. 487 (1820): *Vieill. Faun. Franç.* p. 253, pl. 110. fig. 1 (1828); *Wern. Atl. Orn. d'Eur.* ord. 10, pl. 18 (1828); *Roux, Orn. Prov.* ii. p. 42, pl. 260 (1830); *Schinz, Nat. Abbild. Vög.* p. 271 (1833); *Jard. Nat. Lib., Orn.* iv. p. 105,

pl. iv. (1834); *Webb & Berth. Orn. Can.* p. 29 (1836–44) [Teneriffe, Gomera, Hierro]; *Gould, B. Europe*, iv. pl. 261. fig. 1 [text] (1837); *Keys. & Blas. Wirbelth. Europa's*, p. 201 (1840); *Schinz, Europ. Orn.* i. p. 289 (1840); *Malherbe, Faun. Orn. Sicil.* p. 154 (1843); *Dicks. & Ross, P. Z. S.* 1844, p. 66; *Degl. Orn. Europ.* ii. p. 56 (1849); *Bolle, J. f. O.* 1855, p. 173 [not in Fuerteventura & Lanzarote]; *id. J. f. O.* 1857, p. 333; *Linderm. Vög. Griechenl.* p. 123 (1860); *Sperling, Ibis*, 1864, p. 285; *Degl. et Gerbe, Orn. Europe*, ii. p. 71 (1867); *Wright, Ibis*, 1869, p. 253 [Malta?]; *Hutton, Ibis*, 1870, p. 397 [Auckland, N. Zealand]; *Homeyer, J. f. O.* 1870, p. 228; *Fritsch, Nat. Vög. Europa*, p. 286 (1870), pl. xxix. fig. 6 (1871); *Godman, Ibis*, 1872, p. 219 [Canaries]; *Brooke, Ibis*, 1873, p. 335 [Sardinia]; *Giglioli, Ibis*, 1881, p. 207 [Sardinia]; *id. Avif. Ital.* p. 340 (1886); *id. Avif. Ital.* i. p. 524 (1889), ii. p. 658 (1890), iii. p. 515 (1891).

Perdix barbara, *Bonn. Tabl. Encycl. Méth.* i. p. 208, pl. 94. fig. 2 (1791).

Alectoris, *Kaup* (Perdix petrosa, *Lath.*), *Nat. Syst.* p. 180 (1829).

Caccabis petrosa, *Gray, List of B.* pt. iii. *Gall.* p. 37 (1844); *id. Gen. B.* iii. p. 508 (1846); *Salvin, Ibis*, 1859, p. 353 [E. Atlas]; *Tristr. Ibis*, 1860, p. 72 [S. of Mzab Country, N. Sahara]; *Lilford, Ibis*, 1866, p. 384 [Gibraltar, introd.]; *Chambers, Ibis*, 1867, p. 101 [Tripoli]; *Drake, Ibis*, 1867, p. 428 [Tangier & E. Morocco]; *Taczan. J. f. O.* 1870, p. 51 [Constantine, Algeria]; *Saunders, Ibis*, 1871, p. 223 [Murcia]; *Gurney, Ibis*, 1871, p. 296 [Oran]; *Lilford, Ibis*, 1875, pp. 9, 35 [San Antioco]; *Dress. B. Europe*, vii. p. 111, pl. 471. fig. 2 (1875); *Irby, Orn. Gibraltar*, p. 136 (1875); *Dixon, Ibis*, 1882, p. 577 [Constantine]; *Saund. ed. Yarrell's Brit. B.* iii. p. 121 (1882); *Salvad. El. Ucc. Ital.* p. 200 (1887); *Koenig, J. f. O.* 1888, p. 258 [Tunis]; *Reid, Ibis*, 1888, pp. 75, 76 [Teneriffe]; *Waldo, Ibis*, 1889, p. 6 [Gomera]; *Tristram, Ibis*, 1889, p. 27; *Koenig, J. f. O.* 1890, p. 450; *Waldo, Ibis*, 1890, p. 436 [Lanzarote]; *Evans, Ibis*, 1891, p. 76; *Saunders, Ibis*, 1891, p. 186; *Waldo, Ibis*, 1893, p. 201 [Teneriffe, Gomera, Lanzarote].

Caccabis barbara, *Sclat. P. Z. S.* 1859, p. 436.

Caccabis (Alectoris) petrosa, *Gray, List Gallinæ Brit. Mus.* p. 81 (1867); *id. Hand-l. B.* ii. p. 275 (1870).

Adult male and female. Differ from *C. saxatilis* in having the top of the head very dark chestnut; the outer scapulars margined with bright chestnut; the ear-coverts dark chestnut; the lores, chin, throat, and sides of the face grey, like the superciliary stripes: a dark chestnut band surrounding the sides and front of the neck, and most of the feathers, especially on the sides, with a white terminal spot; the breast vinaceous, and the feathers of the sides and flanks coloured as follows:—the basal part is grey, bounded by a narrow black cross-bar; the middle part is buff, shading into white, and divided from the terminal chestnut part by a second narrow black band. The males are provided with a pair of blunt wart-like spurs. Iris brown. Bare skin round the eye, bill, and legs red.

Male. Total length 12·5 inches, wing 6·5, tail 4·1, tarsus 1·8.

Female. Total length 12·4 inches, wing 6·1, tail 3·9, tarsus 1·7.

Hab. N.W. Africa, Gibraltar [introduced], Sardinia, Malta?; Islands of Teneriffe, Gomera, Lanzarote, and Hierro, Canaries.

a. ♂ ad. sk.	Genoa.	Salvin-Godman Coll.
b. ♂ ad. sk.	San Remo (*F. Gould*).	Gould Coll.
c. ♀ ad. sk.	Tripoli, Dec.	Gould Coll.
d. ♂ ad. sk.	Tunis, March.	Gould Coll.
e–g. ♂ ad. sk.	Tangiers.	Shelley & Tweeddale Colls.
h–k. ♂ ♀ ad. sk.	Teneriffe, April (*F. D. Godman*).	Salvin-Godman Coll.
l. ♀ ad. sk.	Teneriffe, March.	E. G. B. Meade-Waldo, Esq. [P.].

Hybrid between Caccabis saxatilis *and* C. petrosa. *See* p. 112.

5. Caccabis melanocephala.

Perdix melanocephala, *Rüpp. N. Wirbelth., Vög.* p. 11, pl. v. (1835) [Jeddah].
Chacura melanocephala, *Rüpp. Vög. N.O.-Afr.* p. 106, no. 377 (1845); *Heugl. Vög. N.O.-Afr.* p. 50, no. 524 (1856).
Caccabis melanocephala, *Gray, Gen. B.* iii. p. 508 (1846); *Heugl. Orn. N.O.-Afr.* iii. p. 919 (1873) [Mecca]; *Yerbury, Ibis*, 1886, p. 19 [Aden Dist.]; *Barnes, Ibis*, 1893, p. 166 [Aden].
Francolinus yemensis, *Nichols. P. Z. S.* 1851, p. 128, pl. 40.
Caccabis melanocephalus, *Gray, Hand-l. B.* ii. p. 274 (1870).
Perdix bottæ, *vide Heugl. Orn. N.O.-Afr.* iii. p. 919 (1873).
Caccabis yemensis, *Heugl. Orn. N.O.-Afr.* iii. p. 918 (1873).

Adult male and female. Lores, top of the head, and nape black, the latter more or less washed with deep chestnut and somewhat elongate, forming a moderate crest; neck pale isabelline, shaded here and there with dull rufous. Rest of the upper parts slate-blue, each feather, especially on the upper back and wing-coverts, margined with brownish isabelline. Quills as in other members of the genus. A wide white superciliary stripe, which commences behind the lores and in front of the eye, is continued backwards on the sides of the head and shades into the neck. A black line below the eye ending in a patch above the angle of the gape; a black spot on the chin and one on either side at the base of the lower mandible. Ear-coverts black, fringed with buff; the white cheeks and throat are surrounded by a wide black band terminating on either side behind the ear-coverts and continued down the middle of the neck. The feathers of the ear-coverts, throat, and fore neck are elongate and somewhat hairy in appearance. Chest and upper breast grey, margined with isabelline, some of the feathers with a small black spot on one or both webs near the extremity of the margin. Middle of the lower breast and belly, thighs, and under tail-coverts buff. Feathers of the sides and flanks slate-grey, with the terminal part white crossed by two narrow black bars, the outer subterminal and the inner dividing the grey from the white. The tail-feathers are dark grey, shading into blackish towards the extremity and tipped with buff, the two middle pairs are also finely mottled, especially towards the edge of the webs, with buff and dusky.

Male. Total length 16·6 inches, wing 7·7, tail 5·7, tarsus 2·25.
Female. Total length 16 inches, wing 7·2, tail 5·5, tarsus 2·1.
Hab. S.W. Arabia, Jeddah, Mecca to Aden.

a. ♀ ad. sk.	[Arabia.]	Zoological Soc. Coll.
b. ♂ ad. sk.	Midian.	Sir R. Burton [P.].
c. ♀ ad. sk.	Zaidah, near Aden, Dec.	Col. J. Y. Yerbury [P.].
d. ♀ ad. sk.	Haith-al-him, March (*J. Y. Yerbury*).	Hume Coll.
e. ♂ ad. sk.	Lahej, Sept.	W. T. Blanford, Esq. [C.].

5. AMMOPERDIX.

Type.
Ammoperdix, *Gould, B. Asia*, vii. pl. i. or part iii. (1851). A. bonhami.

Sexes quite different.

Tail with 12 feathers, somewhat rounded, but feathers subequal, and about half the length of the wing.

1st primary = 6th, and is not much shorter than the 3rd, which is slightly the longest.

Claws short, somewhat curved. Tarsus equals middle toe and claw; no trace of spurs.

Flank-feathers in the male barred *longitudinally*; no bare spaces behind the eye and on the cheek.

Range. N.E. Africa, S.W. Asia.

Key to the Species.

I. Flank-feathers vinaceous and chestnut, margined on either side with black.
  a. A black band across the forehead and continued backwards in superciliary stripes .. *bonhami* ♂, p. 123.
  b. No black band across the forehead or above the eyes ..... *heyi* ♂, p. 125.
II. Flank-feathers buff, mottled with black ..... *bonhami* ♀, p. 123. *heyi* ♀, p. 125.

1. Ammoperdix bonhami.

Perdix bonhami, *Fraser, P. Z. S.* 1843, p. 70 [Teheran]; *Des Murs, Icon. Orn.* pl. 29 (1849).
Caccabis bonhami, *Gray, Ann. Mag. N. H.* xi. p. 372 (1843); *id. Gen. B.* iii. p. 508 (1846); *Fraser, Zool. Typ.* pt. 3, pl. 61 (1849).
Perdix griseogularis, *Brandt, Bull. Acad. St. Pétersb.* i. p. 365 (1843); *Severtz. Turkest. Jevotnie*, p. 68 (1873); *id. J. f. O.* 1875, p. 181.
Ammoperdix bonhami, *Gould, B. Asia*, pl. i. (1851); *Adams, P. Z. S.* 1858, p. 503 [N. Punjab]; *Jerd. B. Ind.* iii. p. 567 (1863); *Hume, Str. F.* i. p. 226 (1873) [Hills of Sindh & Mekran]; *id. Nests & Eggs Ind. B.* p. 540 (1873); *Ball, Str. F.* iii. p. 209 (1875) [Suliman Hills]; *Dresser, Ibis*, 1876, p. 323; *Butler, Str. F.* iv. p. 41 (1876) [N. Guzerat]; *Blanf. E. Pers.* ii. p. 274 (1876) [Baluchistan, Shiraz Dist.]; *Butl. Cat. B. Sind, etc.* p. 54 (1879); *Hume & Marsh. Game B. Ind.* ii. p. 45, pl. (1879); *Barnes, Str. F.* ix. pp. 219, 458 (1880) [Chaman, S. Afghanistan]; *Dress. B.*

Europe, vii. p. 117, pl. 472 (1880) [Euphrates Valley]; *Swinhoe, Ibis*, 1882, p. 119 [S. Afghanistan]; *Sharpe, Ibis*, 1886, p. 498 [Bushire]; *Pleske, Mém. Acad. St.-Pétersb.* (7) xxxvi. no. 3, p. 47 (1888) [Bokhara]; *Sharpe, Tr. Linn. Soc.* (2) *Zool.* v. p. 87 (1889); *St. John, Ibis*, 1889, p. 175 [S. Afghanistan & Kelát]; *Oates, ed. Hume's Nests & Eggs Ind. B.* iii. p. 433 (1890); *Barnes, Ibis*, 1893, p. 167 [Aden].

Ammoperdix griseogularis, *Filippi, Viag. Pers.* i. p. 351 (1865); *Radde, Orn. Caucas.* p. 352 (1884); *id. u. Walt. Ornis*, 1889, p. 87; *Zaroudn. Bull. Mosc.* lxi. p. 324 (1885) [Transcaspia]; *id. l. c.* (n. s.) iii. p. 108 (1890).

Caccabis (Ammoperdix) bonhami, *Gray, List Gallinæ Brit. Mus.* p. 81 (1867); *id. Hand-l. B.* ii. p. 275 (1870).

Perdix cinereogularis, *Cab. J. f. O.* 1873, p. 458.

Adult male. Top of the head and nape dull grey, most of the feathers fringed with buff in freshly moulted specimens. The sides and the greater part of the back of the neck white barred with grey. Upper part of the mantle vinous isabelline, faintly barred with grey, and shading into isabelline on the rest of the upper parts; the lower back, rump, and upper tail-coverts have a row of V-shaped black spots along the shaft of each feather. Scapulars, median and secondary coverts finely mottled with buff, and the inner webs of the former are also vermiculated with black. Primaries and secondaries brown, the first primary uniform, the remainder barred and washed on the basal half of outer web with rufous buff, and with whitish buff on the terminal portion; secondaries mottled on the outer and somewhat on the inner web with buff. A black band across the forehead continued in a superciliary stripe down either side of the head. A white band from the nostrils to the eye continued behind the eye across the ear-coverts, and ending in a small vinous patch on the side of the neck. Chin whitish; cheeks, throat, and fore part of the neck grey. Chest and breast delicate vinous buff; belly white, with rufous margins to the feathers; vent white, under tail-coverts buff. Feathers of the sides and flanks vinous chestnut on the outer web, vinous fawn or whitish on the inner, and margined on either side with black. Centre pair of tail-feathers rufous buff mottled with dusky; outer pairs chestnut, more or less tipped with the same. Iris orange-brown; bill bright orange; legs and feet greenish yellow. Total length 9·5 inches, wing 5·2, tail 2·4, tarsus 1·2.

Adult female. Differs from the male in having the general colour of the top of the head and upper parts uniform darker isabelline, irregularly barred all over with faint rufous-buff bars; the wings more coarsely marked, and the inner webs of the scapulars blotched with black; the forehead, rest of the head, throat, sides and fore part of the neck whitish, marked and barred with dusky grey; and the rest of the underparts darker isabelline, clouded all over with dusky and vermiculated with blackish on the feathers of the sides and flanks. Iris orange-brown; bill brown; legs and feet dusky yellow. Total length 9·5 inches, wing 4·9, tail 2·3, tarsus 1·15.

A quite young bird resembles the female in general plumage, but the feathers of the chest have a whitish patch at the extremity of the shaft.

Hab. S.W. Asia, extending in the west to the Euphrates Valley, in the east to N.W. India, in the north to Transcaspia, and in the south to Aden.

a. ♂ ad. sk.	[Palestine.]	Shelley Coll.
a^1, a^2. ♂ ♀ ad. sk.	Biredjik, Euphrates, Feb. (*C. G. Danford*).	H. E. Dresser, Esq. [E.].
b. ♂ ad. sk.	Mesopotamia (*Jones*).	India Museum [P.].
c. ♀ ad. st.	N. Persia.	Sir Kenneth Loftus [P.].
d, *e*. ♂ ♀ ad. sk.	Teheran, Jan. (*E. W. Bonham*).	Zoological Soc. Coll. (Types of the species.)
f. ♂ ad. sk.	Shiraz, 5000 ft., June.	Sir O. St. John [C.].
g, *h*. ♂ ♀ ad. sk.	Bushire, Jan., Feb.	A. J. V. Palmer, Esq. [P.].
i. ♂ ad. sk.	Mekran Coast, Feb. (*A. O. H.*).	Hume Coll.
k. ♂ ad. sk.	Candahar, Afghanistan, May (*Sir O. St. John*).	Hume Coll.
l. ♀ ad. sk.	Candahar, Jan.	Lieut.-Col. Swinhoe [P.].
m. ♂ ad. sk.	Kharez-dasht, Nov. (*J. Aitchison*).	Afghan Boundary Comm. [P.].
n–s. ♂ ♀ ad. st. et juv. sk.	Bolan Pass (*W. Griffith*).	India Museum [P.].
t, *u*. ♂ ♀ ad. sk.	Khelat, May (*O. T. Duke*).	Hume Coll.
v. ♂ ad. sk.	Baluchistan, Feb.	W. T. Blanford, Esq. [C.].
w, *x*. ♂ ♀ ad. sk.	Duryale Hills, Upper Sindh, Jan. (*A. O. H.*).	Hume Coll.
y–d'. ♂ ♀ ad. sk.	Khewra, Salt Range, April (*A. O. H.*).	Hume Coll.
e'–r'. ♂ ♀ ad. sk.	Murdan, Feb., Mar., Dec. (*J. R. Johnson*).	Hume Coll.
s', *t'*. ♂ ♀ ad. sk.	Murdan, Mar. (*J. R. Johnson*).	Salvin-Godman Coll.
u', *v'*. ♂ ♀ ad. sk.	Attock, March.	Hume Coll.
w', *x'*. ♂ ♀ ad. sk.	Rawul Pindee, Oct.	Hume Coll.
y'. ♂ ad. sk.	Loodhiana (*W. Griffith*).	India Museum [P.].
z', *a''*. ♂ ♀ ad. sk.	[Thibet.]	Tweeddale Coll.
b''. ♀ ad. st.	[Thibet.]	Lord Gifford [P.].
c''. ♂ ad. sk.	No locality.	Gould Coll.

2. Ammoperdix heyi.

Perdix heyi, *Temm. Pl. Col.* v. pls. 37. 38, nos. 328, 329 (1825) [Desert of Akaba, Arabia]; *Rüpp. N. Wirbelth., Vög.* p. 10 (1835) [Red Sea Coast].

Caccabis heyii, *Gray, List of B.* pt. iii. *Gall.* p. 37 (1844); *id. Gen. B.* iii. p. 508 (1846); *Tristr. Ibis*, 1859, p. 36; *id. P. Z. S.* 1864, p. 449 [Dead Sea Basin]; *Wyatt, Ibis*, 1870, p. 17 [Sinai]; *id. Mamm. & Avif. Sinai*, pl. xix. (1873); *Hart, Faun. Flor. Sinai*, p. 225 (1891).

Ptilopachus hayi, *Rüpp. Vög. N.O.-Afr.* p. 106, no. 375 (1845) [Djeddah & Sinai].
Ammoperdix heyi, *Gould, B. Asia*, vii. pl. 2 (1851); *Adams, Ibis*, 1864, p. 28 [Nubia]; *Taylor, Ibis*, 1867, p. 67 [Assouan]; *Tristr. Ibis*, 1868, p. 214 [Arabia Petræa]; *Shelley, Ibis*, 1871, p. 143 [Egypt]; *id. B. Egypt*, p. 222 (1872); *Tristr. Palest.* p. 123 (1884); *Sharpe, Ibis*, 1886, p. 166 [Muscat].
Caccabis rupicola, *Licht. Nomencl.* p. 85 (1854).
Ptilopachus heyi, *Heugl. Vög. N.O.-Afr.* p. 50, no. 522 (1856).
Caccabis (Ammoperdix) heyi, *Gray, List Gallinæ Brit. Mus.* p. 82 (1867); *id. Hand-l. B.* ii. p. 275 (1870).
Ammoperdix hayi, *Heugl. Orn. N.O.-Afr.* iii. p. 913 (1873); *Kaiser, Ornis*, 1890, p. 522 [Egypt].
Perdix flavirostris (*Rüpp. MS.*), *Heugl. Orn. N.O.-Afr.* iii. p. 914 (1873).

Adult male. Differs from the male of *A. bonhami* in having the general colour of the upper parts much paler. The top of the head is vinous grey, and shades gradually into uniform vinous fawn on the neck and back and pale isabelline on the wings, rump, and upper tail-coverts, which are also barred and vermiculated with dusky grey. The secondaries rufous buff, mottled with blackish grey. A white band across the forehead joining the white band which passes from the nostrils to the eye, and is continued behind over the ear-coverts. Fore part of the cheek dark chestnut; chin and middle of the throat rufous chestnut, rest and the head and throat dull vinous grey. The rest of the underparts are the same as in the male of *A. bonhami*. Total length 9·5 inches, wing 5, tail 2·5, tarsus 1·25.

Adult female. Is not to be distinguished from the female of *A. bonhami*.

Hab. Both sides of the Red Sea, extending north to the Dead Sea, and westwards to Egypt and Nubia, about as far south as 20° of N. latitude, and eastwards to Muscat, Persian Gulf.

a, b. ♂ ♀ ad. st.	N. Africa.	Purchased.
c. ♀ ad. sk.	Dendor, Nubia.	Dr. Adams [P.].
d. ♀ ad. sk.	Egypt.	Sir G. Wilkinson [P.].
e, f. ♂ ♀ ad. sk.	Engedi, Palestine, Jan. (*H. B. Tristram*).	Salvin-Godman and Tweeddale Colls.
g. ♂ ad. sk.	Jebel Usdum, Palestine.	Canon H. B. Tristram [C.].
h. ♀ ad. sk.	Jericho.	Canon H. B. Tristram [C.].
i. ♂ ad. sk.	Hills above Jericho, Dec. (*H. B. Tristram*).	Tweeddale Coll.
k. ♀ ad. sk.	Ain Sultan, Jericho, April (*H. B. Tristram*).	Salvin-Godman Coll.
l, m. ♂ ♀ ad. sk.	Muscat, Arabia.	Col. Mills [P.].
n. Ad. skeleton.	Djeddah, Arabia.	Purchased.
o, p. Skeletons.		

6. FRANCOLINUS.

	Type.
Francolinus, *Steph. in Shaw's Gen. Zool.* xi. pt. ii. p. 316 (1819)	F. francolinus.
Chætopus, *Swains. Classif. B.* ii. p. 344 (1837)	F. bicalcaratus.
Attagen, *Keysl. u. Blas. Wirbelth. Europ.* p. 201 (1840)	F. francolinus.
Scleroptila, *Blyth, Cat. B. Mus. As. Soc.* p. 250 (1849)	F. levaillanti.
Clamator, *Blyth, Cat. B. Mus. As. Soc.* p. 250 (1849)	F. capensis.
Didymacis, *Reichenb. Natürl. Syst., Vög.* p. xxviii (1852)	F. bicalcaratus. F. levaillanti.
Scleroptera, *Bonap. C. R.* xlii. p. 882 (1856)	
Ortygornis, *Reichenb. Natürl. Syst., Vög.* p. xxviii (1852)	F. pondicerianus.
Perdicideus, *Heine, J. f. O.* 1860, p. 198	F. lathami.

Sexes usually similar or nearly similar, but in a few species quite different.

Tail of 14 feathers and about half the length of the wing.

1st primary varies in length between the 7th and 10th; 4th to the 6th subequal and longest.

Tarsus without spurs, or with one or more pairs.

Throat covered with feathers.

Range. Africa, Cyprus, and S.W. Asia.

In *F. squamatus* and *F. schuetti* the 1st primary is slightly shorter than the 10th, so that the character of the wing is somewhat Pheasant-like, and in these two instances may be considered in some degree to break down: but the length of the tail at once distinguishes these birds as Francolins.

Key to the Species.

A. Both webs of the primaries with a well-defined row of rufous or buff spots.
  a. A chestnut nuchal collar.
    a'. Throat black ..... *francolinus* ♂, p. 132.
    b'. Throat white ..... *francolinus* ♀, p. 132.
  b. No chestnut nuchal collar.
    c'. Scapulars chestnut or chestnut and black, with white or buff ocelli. Underparts covered with white ocelli ..... *chinensis* ♂, p. 136.
    d'. Scapulars black, edged with brown, with short transverse bars and spots of buff. Underparts buff, barred with black ..... *chinensis* ♀, p. 136.
    e'. Scapulars black, edged with buff .... *pictus* ♂ ♀, p. 138.
B. Both webs of the primaries without a well-defined row of buff spots.
  c. With white or buff shaft-streaks on the feathers of the back and scapulars.
    f'. Chin and throat black.
      a''. Breast-feathers black, with heart-shaped white centres ..... *lathami* ♂, p. 139.

b''. Breast-feathers black, with heart-shaped white centres, and margined externally with brown ..... *lathami* ♀, p. 139.

g'. Chin and throat not black.

c''. Breast and flanks whitish buff, uniformly barred with black. [p. 141.

a'''. With narrow wavy black bars .. *pondicerianus* ♂ ♀,

b''. With wider regular black bars.

*a*⁴. Shoulders, wing-coverts, and the outer web of the secondaries barred with brownish grey.

*a*⁵. Chest and back of the neck barred with black and white. *coqui* ♂, p. 143.

*b*⁵. Chest and back of the neck vinaceous grey and dull chestnut, with white shaft-streaks. *coqui* ♀, p. 143.

*b*⁴. Shoulders, wing-coverts, and the outer webs of secondaries uniform light red ..... *schlegeli* ♂, p. 145.

d''. Breast and flanks are not whitish buff, uniformly barred with black.

c'''. Feathers surrounding the neck barred alternately with black and white, contrasting strongly with the rest of the plumage ..... [p. 145. **streptophorus* ♂ ♀,

d'''. Feathers surrounding the neck dark chestnut, edged on either side with white or buff.

*c*⁴. Breast and underparts without chestnut spots.

*c*⁵. Size larger: wing about 6·5.. **sephæna* ♂ ♀, p. 146.

*d*⁵. Size smaller: wing about 5·6 . **granti* ♂ ♀, p. 148.

*d*⁴. Most of the feathers of the breast and underparts with an oblong dark chestnut spot at the extremity of the shaft.

*e*⁵. Size larger: wing 6·5 ..... *spilogaster* ♂, p. 149.

*f*⁵. Size smaller: wing 5·7..... **kirki* ♂ ♀, p. 149.

e'''. No collar of feathers contrasting with the rest of the plumage surrounds the neck.

*e*⁴. Underparts uniform buff ..... *albogularis* ♂ ♀, p. 149.

*f*⁴. Underparts with various markings.

*g*⁵. Throat white, more or less spotted with black, and not circumscribed by a marked black line.

*a*⁶. Throat equally spotted all over with round black spots. *spilolæmus* ♂ ♀, p. 150.

*b*⁶. Throat spotted on the edges with black; sometimes the

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* Females differ from the males in having the wing-coverts and scapulars transversely barred with buff.

middle feathers are in addition edged with black.

a^7. Middle of breast and belly pale buff, with black shaft-stripes ..... *gutturalis* ♂ ♀, p. 151.

b^7. Middle of breast and belly pale buff, with irregular arch-shaped black bars, giving it an ocellated appearance.

a^8. Inner webs of the primaries mostly chestnut..... *uluensis* ♂, p. 152.

b^8. Inner webs of the primaries brown, more or less mottled with rufous ..... *africanus* ♂ ♀, p. 152.

h^5. Throat white, neither spotted with black nor surrounded by a black line.

c^6. Feathers of the upper back brownish grey, mixed with black and barred with buff. *finschi* ♂ ♀, p. 153.

d^6. Feathers of the upper back chestnut in the middle, variegated with black and margined with grey..... *castaneicollis* ♀, p. 153.

i^5. Throat pure white, circumscribed by a marked black line.

e^6. The black and white superciliary stripes meet at the back of the head, and are confluent on the nape .... *levaillanti* ♂ ♀, p. 154.

f^6. The black and white superciliary stripes do not meet at the back of the head, but continue down the sides of the neck.

c^7. Upper back like the rest of the upper parts; only nape rufous.

c^8. Lower part of breast and belly rich buff, streaked with chestnut and dotted with black..... *gariepensis* ♂ ♀, p. 155.

d^8. Lower breast and belly buff, almost immaculate ..... *jugularis* ♂ ♀, p. 156.

e^8. Lower breast and belly whitish, with black V-shaped bars ..... *shelleyi* ♂, p. 157.

d^7. Upper back and nape with a large rufous chest nut patch spotted with black..... *elgonensis* ♀. p. 157.

k^5. Throat bright rufous chestnut; feathers of underparts white, edged on either side with blackish brown ..... *gularis* ♂ ♀, p. 158.

d. None of the feathers of the upper surface have white shaft-streaks. (In *F. erckeli* a few of the outer scapulars have buff shafts.)

h'. Whole of the underparts narrowly barred with black and white ..... *adspersus* ♂ ♀, p. 159.

i'. Underparts not barred.

e''. Inner webs of the primaries pale buff, or brown, barred or freckled with buff.

f'''. Chest mixed with rufous.

g^4. Underparts with rufous shaft-streaks; inner webs of primaries freckled with rufous .. *griseostriatus* ♂, p. 160.

h^4. Each feather of the underparts with a black raquet-shaped shaft-streak; inner webs of primaries with irregular longitudinal or transverse buff stripes. *bicalcaratus* ♂ ♀, p. 160.

g'''. Chest not mixed with rufous.

i^4. Greater part of the inner webs of the primaries uniform buff; feathers of the chest buff, with a wide brownish-black stripe down the middle of each.

l^5. Top of the head and ground-colour of the upper parts reddish or olive-brown; feathers of the mantle widely margined all round with whitish buff .. *clappertoni* ♂ ♀, p. 161.

m^5. Top of the head and ground-colour of the rest of the upper parts rich dark brown; feathers of the mantle narrowly margined on the sides with white..... *gedgii* ♂, p. 163.

k^4. Inner webs of primaries freckled or dotted with buff; underparts strongly striped with brownish black on a white or buff ground.

n^5. On a white ground ..... *hartlaubi*, p. 163.

o^5. On a buff ground ..... *icterorhynchus* ♂ ♀, [p. 163.

l^4. Inner webs of primaries with longitudinal rufous or buff stripes; feathers on the chest dark brown, narrowly margined with whitish buff ..... *sharpii* ♂ ♀, p. 164.

f'. Inner webs of primaries uniform dark brown, sometimes slightly dotted with buff towards the marginal extremity.

h'''. Throat spotted with black.

m^4. Lower back and scapulars black-

ish brown, each feather narrowly margined and vermiculated with white ..... *capensis* ♂ ♀, p. 165.

n^4. Lower back and scapulars reddish or olive-brown, finely mottled with black.

p^5. Breast and belly white, with V-shaped black marks .... *natalensis* ♂ ♀, p. 166.

q^5. Breast and belly white, with a heart-shaped black mark on each feather ..... *hildebrandti* ♂, p. 168.

i'''. Throat not spotted with black.

o^4. Underparts bright rust-colour, dotted with buff; flight-feathers without a clear spot at the extremity; tail-feathers and outer webs of the wings brown, vermiculated with rufous buff.... *hildebrandti* ♀, p. 168.

p^4. Underparts clear ochre; isolated feathers with white borders, and some of the breast-feathers spotted with black at the tip; flight-feathers with a clear spot at the extremity; tail-feathers and outer webs of the wings rust-red, barred with dark brown ..... *fischeri* ♀, p. 169.

q^4. Underparts neither rust-coloured nor ochre.

r^5. Feathers of the back of the neck brownish or blackish, edged with white or grey.

g^6. Breast-feathers whitish buff, with dark shafts .... *squamatus* ♂ ♀, p. 169.

h^6. Breast-feathers grey or buff, shading into brown towards the shaft.

e^7. Margins of the feathers of the middle of the breast and belly dull grey .... *schuetti* ♂, p. 170.

f^7. Margins of the feathers of the middle of the breast and belly pale buff .... *schuetti* ♀, p. 170.

i^6. Breast-feathers dark brown, with a wide submarginal band on each side ..... *ahantensis* ♂ ♀, p. 171.

s^5. Feathers of the back of the neck chestnut, edged with white or grey.

i^6. Bill red; all the feathers of the underparts with wide chestnut stripes down the centre ..... *jacksoni* ♂, p. 171.

l^6. Bill black; all the feathers of the underparts with an oblong spot at the extremity ..... *erckeli* ♂ ♀, p. 172.

1. Francolinus francolinus.

The Francolin, *Edw. Glean. Nat. Hist.* v. p. 75, pl. 246 (1758).

Tetrao francolinus, *Linn. S. N.* i. p. 275 (1766); *Güldenstädt, Reise Russl.* i. p. 226 (1787); *Gmel. S. N.* i. pt. ii. p. 756 (1788); *Hayes. Osterl. Menag.* pl. 93 [text] (1794); *Donndorff, Orn. Beytr.* ii. p. 109 (1795).

Le Francolin, *Buffon, Hist. Nat.* ii. p. 438 (1771); *D'Aubent. Pl. Enl.* ii. pls. 45, 46 (nos. 147, 148).

Francolin Partridge, *Lath. Gen. Syn.* ii. p. 759 (1783); *id. Gen. Hist.* viii. p. 271 (1823).

Perdix francolinus, *Lath. Ind. Orn.* ii. p. 644 (1790); *Temm. Pig. et Gal.* iii. pp. 340, 723 (1815); *Vieill. Tabl. Encycl. Méth.* i. p. 214 pl. 95. fig. 2 (1823); *Vulenc. Dict. Sci. Nat.* xxxviii. p. 437 (1825); *Werner, Atl. Ois. d'Eur.* Order 10, pl. 15 (1828); *Vieill. Faun. Franç.* p. 254, pl. 110. fig. 2, pl. 111. fig. 1 (1828); *Less. Traité d'Orn.* p. 505 (1831); *Schinz, Nat. Abbild. Vög.* p. 269 (1833); *Jard. Nat. Lib., Orn.* iv. p. 110, pl. vi. (1834); *Schinz, Europ. Faun.* i. p. 287 (1840); *Benoit, Orn. Sicil.* p. 118 (1840); *Démid. Voy. Russ. Mérid.* iii. p. 220 (1840); *Malherbe, Faun. Orn. Sicil.* p. 151 (1843); *Degl. Orn. Europ.* ii. p. 48 (1849); *Schinz, Nat. Vögel*, p. 161, pl. 79 (1853); *Sperling, Ibis*, 1864, p. 284 [Syria]; *Bree, B. Europe*, iii. p. 236, pl. (1867).

Francolinus vulgaris, *Steph. in Shaw's Gen. Zool.* xi. p. 319 (1819); *Gould, B. Europe*, iv. p. 259, pl. (1837); *Gray, List Gall. B.* iii. p. 35 (1844); *id. Gen. B.* iii. p. 505 (1846); *Blyth, Cat. B. Mus. As. Soc.* p. 251 (1849); *Adams, P. Z. S.* 1858, p. 502 [N. India], 1859, p. 186; *Irby, Ibis*, 1861, p. 236 [Oudh & Kumaon]; *Lilford, Ibis*, 1862, p. 352 [extinct in Europe]; *Heugl. J. f. O.* 1862, p. 411 [Nile Delta]; *Bree, Ibis*, 1863, p. 113; *Schlegel, Ibis*, 1863, p. 116 [Sicily]; *Jerd. B. Ind.* iii. p. 558 (1864); *Fitzinger, Atl. Nat. Vög.* fig. 236 (1864); *Tristram, P. Z. S.* 1864, p. 449 [Palestine]; *Filippi, Viag. Pers.* i. p. 351 (1865); *Gray, List Gallinæ Brit. Mus.* p. 53 (1867); *Degl. & Gerbe, Orn. Europ.* ii. p. 59 (1867); *Blyth, Ibis*, 1867, p. 157; *Tytler, Ibis*, 1868, p. 203 [Simla to Mussooree]; *Tristram, Ibis*, 1868, p. 212 [Syria]; *v. Felz. Ibis*, 1868, p. 321 [Koteghur]; *Beavan, Ibis*, 1868, p. 383; *Saunders, Ibis*, 1869, p. 396; *Salvadori, Ibis*, 1870, p. 153 [Sicily]; *Saunders, Ibis*, 1870, p. 299; *Gray, Hand-l. B.* ii. p. 266, no. 9680 (1870); *Fritsch, Nat. Vög. Europa*, p. 292 (1870), pl. 29. fig. 8 (1871); *Shelley, B. Egypt*, p. 222 (1872); *Saunders, Ibis*, 1872, p. 80; *Hume, Nests and Eggs Ind. B.* p. 537 (1873); *id. Str. F.* i. p. 226 (1873) [Sindh]; *Ball, Str. F.* ii. p. 427 (1874) [Chota Nagpur]; *Lilford, Ibis*, 1875, p. 6; *Brooks, Str. F.* iii. p. 256 (1875) [Mussooree & Gangaotri]; *Le Messurier, Str. F.* iii. p. 379 (1875) [Sindh]; *Butler, Str. F.* iv. p. 5 (1876) [Deesa]; *Schalow, J. f. O.* 1876, p. 186; *Dresser, B. Europe*, vii. p. 123, pl. 473 (1876); *Blanf. East. Persia*, ii. p. 273 (1876) [Baluchistan, S. Persia, & Caspian]; *Danford, Ibis*, 1877, p. 262 [S. Asia Minor]; *Ball, Str. F.* vii. p. 225 (1878) [Ganges to Godaveri]; *Scully, Str. F.* viii. pp. 348, 367 (1879) [Nepal Valley]; *Doig, Str. F.* viii. p. 371 (1879) [E. Narra]; *Butler, Cat. B. Sind*, p. 54 (1879); *Hume & Marshall, Game B. India*, ii. p. 9, pl. (1879) [Sindh, Cutch, N. India, Assam, Cachar, Tipperah, Manipur]; *Müll. J. f. O.* 1879, p. 390 [Cyprus]; *Reid, Str. F.* x. p. 62 (1881) [Lucknow]; *Murdoch, Str. F.* x. p. 168 (1881) [Jacobabad, Sindh]; *Giglioli, Ibis*, 1881, p. 206; *C. Swinhoe, Ibis*, 1882, p. 119 [S. Afghanistan]; *See-*

bohm, *Ibis*, 1883, p. 27 [Caucasus]; *Trist. Palest.* p. 124 (1884); *Marshall, Ibis*, 1884, p. 423 [Chamba]; *Giglioli, Avif. Ital.* p. 337 (1886); *Salvad. Ucc. Ital.* p. 198 (1887); *Taylor, Str. F.* x. p. 530 (1887) [Orissa]; *Hume, Str. F.* xi. p. 304 (1888) [Manipur]; *Sharpe, Trans. Linn. Soc.* (2) *Zool.* v. p. 87 (1889); *Giglioli, Avif. Ital.* pt. i. p. 515 (1889); *St. John, Ibis*, 1889, p. 175 [Afghanistan & Kelât]; *Oates, ed. Hume's Nests & Eggs*, iii. p. 428 (1890); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 291 (1891).

Attagen francolinus, *Keys. & Blas. Wirbelth. Eur.* p. 201 (1840); *Boyd. B. Caucas.* p. 142 (1879); *id. Consp. Av. Imp. Ross.* fasc. i. p. 42 (1884); *Zaroudn. Bull. Mosc.* lxi. p. 322 (1885) [Transcaspia]; *id. l. c.* (n. s.) iii. p. 108 (1890).

Francolinus vulgaris?, var. brevipes, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844); *id. Icon. ined. in Brit. Mus.* nos. 630–2; *Bonap. C. R.* xliii. p. 414 (1856).

Francolinus tristriatus, *Bonap. C. R.* xlii. p. 882 (1856) [Cyprus]; *Bree, Ibis*, 1863, p. 115.

Francolinus henrici, *Bonap. C. R.* xlii. p. 882 (1856) [Sindh].

Francolinus asiæ, *Bonap. C. R.* xlii. p. 882 (1856) [Asia Minor]; *Bree, Ibis*, 1863, p. 115.

Chœtopus francolinus, *Blasius, List B. Europe*, p. 18 (1862).

Francolinus francolinus, *Grant, Ibis*, 1892, p. 38.

Adult male. Top of the head blackish brown, each feather edged with buff; an oblong white patch situated behind the eye covers the hinder part of the cheek and ear-coverts; rest of head, chin, and throat black; a wide dark chestnut ring surrounds the neck. Upper back black, each feather with one or more pairs of white ocelli; middle back, lesser and median wing-coverts, and scapulars blackish brown, edged with buff, and with a submarginal tawny or buff band on each web. Lower back, rump, and upper tail-coverts black, with narrow transverse white bars. Primaries and secondaries and their coverts dark brown, with rows of tawny-buff spots on both webs. Whole chest, breast, and belly black; a few feathers on the sides of the breast, belly, and flanks with a subterminal pair of white ocelli. Thighs and vent rufous, tipped with buff; under tail-coverts dark chestnut. Centre pair of tail-feathers black, barred with white like the upper tail-coverts; rest of tail-feathers with the terminal third black, and the remainder barred with white. Bill black; a small blunt spur on each tarsus; legs and toes orange. Iris brown. Total length 13 inches, wing 6, tail 3·5, tarsus 1·7 (specimens from India). Total length 13·8 inches, wing 6·9, tail 4, tarsus 1·9 (specimens from Cyprus, Asia Minor, &c.).

Adult female. General plumage of the upper parts like that of the male, but the upper back resembles the middle back and wing-coverts, and the general tone of the lower back, rump, and upper tail-coverts is browner. The sides of the face are buff, dotted with black; the ear-coverts blackish brown; chin and throat white; the chestnut collar is confined to the nape; front and sides of the throat and rest of underparts white mixed with buff, with Y-shaped black bars, which vary greatly in intensity, being quite faint in some (? very old) specimens, while in the majority they are very clearly defined, and divide the extremity of each feather into paired white

ocelli. Iris brown. Bill, upper mandible dusky horny, lower pale fleshy; legs and feet brownish red. Total length 12·6 inches, wing 5·9, tail 3·5, tarsus 1·6 (Indian specimens). Total length 13·8 inches, wing 6·6, tail 3·9, tarsus 1·9 (Cyprus &c. specimens).

Immature male has the larger part of the feathers of breast and belly ornamented with a subterminal pair of white ocelli.

In *still younger specimens* the whole of the feathers of the underparts, with the exception of a few in the middle of the chest and breast, have a subterminal pair of white ocelli; while the flanks are buff or white, with large **V**-shaped black bars; the chestnut collar is narrow and incomplete, and the throat is whitish buff mixed with black.

In a *quite young bird* the plumage is like that of the female, and the chestnut collar is only indicated by a few rufous feathers on nape.

It is to be remarked that Indian specimens, although absolutely identical in plumage with those from Cyprus, Asia Minor, and Persia, are considerably smaller in size.

Indian specimens: wing 5·7–6 inches.

Cyprus &c. specimens: wing 6·6–6·9 inches.

Hab. From Cyprus, Palestine, and Asia Minor, through Persia eastwards to Northern and Central India, Assam, Cachar, Tipperah, and Manipur. (Apparently extinct in Sicily.)

a–l. ♂ ♀ ad. sk.	Cyprus, April, May, June, Nov.	Lord Lilford [P.].
m. ♂ ad. sk.	Plain of Gennesaret.	Canon H. B. Tristram [C.].
n, o. ♂ ♀ ad. sk.	Anatolia, Jan., Feb. (*C. G. Danford*).	Salvin-Godman Coll.
p, q. ♂ imm. et ♀ ad. sk.	Osmanjik, Asia Minor, Jan.	C. G. Danford, Esq. [P.].
r. ♂ ad. sk.	Osmanjik, Asia Minor, Jan. (*C. G. D.*).	H. E. Dresser, Esq. [E.].
s. ♀ ad. sk.	Adana, Asia Minor, Jan. (*C. G. D.*).	H. E. Dresser, Esq. [E.].
t, u. ♂ ♀ ad. sk.	Euphrates River.	Euphrates Expedition [P.].
v. ♂ ad. sk.	Fao, Persian Gulf, June.	W. D. Cumming, Esq. [P.].
w, x. ♂ ♀ ad. st.	Persia.	Sir K. Loftus [P.].
y. ♀ ad. sk.	Busrah, Dec.	W. T. Blanford, Esq. [P.].
z. ♂ ad. sk.	Dasht R., Beluchistan, Jan.	W. T. Blanford, Esq. [P.].
a'. ♀ ad. sk.	Dé-Kamran, Oct. (*Dr. Aitchison*).	Afghan Boundary Commission.
b'. ♂ ad. sk.	Kandahar (*W. Griffith*).	India Museum [P.].
c'. ♂ imm. sk.	Shikarpur, Nov. (*Major MacRae*).	Hume Coll.
d', e'. ♂ ad. sk.	Sukkur, Jan., March (*A. O. H. & W. T. Blanford*).	Hume Coll.
f'. ♂ ad. sk.	Karachi, April (*E. A. Butler*).	Hume Coll.
g', h'. ♂ ♀ ad. sk.	Kutch.	Hume Coll.
i'–v³. ♂ ♀ ad. et imm. sk.	Gurgaon Dist., Jan. to Sept. (*A. O. H. & W. N. Chill*).	Hume Coll.

w^3. ♂ ad. sk.	Moultan (*Capt. Tweedie*).	Gould Coll.
x^3–k^4. ♂ ♀ ad. et imm. sk.	Koteghur, June, Oct., Dec.	Hume & Tweeddale Colls.
l^4. ♂ ad. sk.	Fagoo, near Simla, Aug. (*R. C. Beavan*).	Tweeddale Coll.
m^4. ♂ imm. sk.	Hills below Simla (*S. Pinwill*).	Tweeddale Coll.
n^4. ♂ imm. sk.	Near Simla, Oct. (*W. Davison*).	Hume Coll.
o^4. ♂ ad. sk.	Simla (*F. Stoliczka*).	Hume Coll.
p^4–r^4. ♂ ♀ ad. et imm. sk.	Dehra, Feb.	Hume Coll.
s^4–u^4. ♂ ♀ ad. et imm. sk.	Bhagaratti Valley.	Hume Coll.
v^4–z^4. ♂ ad. sk.	Kumaon.	Hume Coll. and India Museum [P.].
a^5, b^5. ♂ ad. et imm. sk.	Almorah, Oct., Nov.	Hume Coll.
c^5, d^5. ♂ ♀ ad. sk.	N.W. Provinces (*S. Pinwill*).	Tweeddale Coll.
e^5, f^5. ♂ ♀ ad. sk.	Kheree Dist., Futtehghur Dist., Feb. (*A. Anderson*).	Hume Coll.
g^5. ♂ ad. sk.	Nepal Valley, June (*J. Scully*).	Hume Coll.
h^5–r^5. ♂ ♀ ad., imm., et juv. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
s^5. Juv. st.	Nepal.	B. H. Hodgson, Esq. [P.].
t^5. ♂ ad. sk.	Darjeeling Terai, March (*L. Mandelli*).	Hume Coll.
u^5. ♂ ad. sk.	Bhotan Doars, April (*L. Mandelli*).	Hume Coll.
v^5. ♀ ad. sk.	Assam (*M'Clelland*).	India Museum [P.].
w^5. ♂ ad. sk.	Shillong, Aug. (*W. Davison*).	Hume Coll.
x^5. ♂ ad. sk.	Shillong, May (*A. W. Chennell*).	Tweeddale Coll.
y^5–a^6. ♂ ♀ ad. sk.	Manipur, Feb., May (*A. O. H.*).	Hume Coll.
b^6. ♂ ad. sk.	Dacca.	Hume Coll.
c^6–e^6. ♂ ♀ ad. sk.	Maunbhoom, Feb., March (*R. C. Beavan*).	Tweeddale Coll.
f^6. ♀ ad. sk.	Deccan, July (*Lieut. Burgess*).	Gould Coll.
g^6. ♂ nr. ad. sk.	Deccan (*Col. Sykes*).	India Museum.
h^6. ♂ imm. sk.	India.	R. Ferguson, Esq. [P.].
i^6. ♂ ad. skeleton.		
k^6. Imperfect skeleton.	Nepal.	B. H. Hodgson, Esq. [P.]

Hybrid between Francolinus francolinus *and* F. pictus.

Francolinus intermedius, *Butler, Str. F.* v. p. 211 (1877) [Deesa]; *id. Cat. B. Sind*, p. 54 (1879); *Grant, Ibis*, 1892, p. 40.
Hybrid between F. pictus and F. vulgaris, *Hume & Marshall, Game B. India*, ii. p. 25, pl. (1879).

Adult male. Most nearly resembles *F. pictus*, but has an ill-defined chestnut collar surrounding the neck; the centre and lower

parts of the throat are thickly spotted with black; there is also a black band from the lores running through the eye above the ear-coverts, and the chest is mostly black; the belly is pale rufous, edged with buff.

a. ♂ ad. sk. Deesa, Aug. (*E. A. Butler*). Hume Coll.
(Type of *F. intermedius*.)

2. Francolinus chinensis.

Le Perdrix de la Chine, *Briss. Orn.* i. p. 234, pl. 28 A. fig. 1 (1760).
Tetrao chinensis, *Osbeck, Voy. en Chine*, ii. p. 326 (1771); *P. L. S. Müll. S. N. Suppl.* p. 129 (1776).
La Perdrix perlée, *Buffon, Hist. Nat.* ii. p. 446 (1771).
Francolin de l'Isle de France, *Sonnerat, Voy. aux Indes*, ii. p. 166, pl. 97 (1782).
Pintado Partridge, *Lath. Gen. Syn.* ii. p. 761 (1783); *id. Gen. Hist.* viii. p. 274 (1823).
Pearled Partridge, *Lath. Gen. Syn.* ii. p. 772 (1783); *id. Gen. Hist.* viii. p. 276 (1823).
Tetrao pintadeanus, *Scop. Del. Flor. et Faun.* pt. ii. p. 93 (1786).
Tetrao perlatus, *Gmel. Syst. Nat.* i. pt. ii. p. 758 (1788).
Tetrao madagascariensis, *Gmel.* (*nec Scop.*) *S. N.* i. p. 756 (1788).
Perdix perlata, *Lath. Ind. Orn.* ii. p. 648 (1790); *Bonn. Tabl. Encycl. Méth.* i. p. 213 (1790); *Temm. Pig. et Gal.* iii. pp. 326, 721 (1815) [part.]; *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 238 (1817); *id. Gal. Ois.* ii. pp. 41, 213 (1825); *Less. Traité Orn.* p. 505 (1831).
Perdix madagascariensis, *Bonn. Tabl. Encycl. Méth.* i. p. 214, pl. 95. fig. 3 (1790).
Francolinus perlatus, *Steph. in Shaw's Gen. Zool.* xi. p. 325 (1819); *Strickl. P. Z. S.* 1842, p. 167; *Gray, List Gall. B.* iii. p. 36 (1844); *id. Gen. B.* iii. p. 505 (1846); *Swinhoe, Ibis*, 1860, p. 63 [Amoy], 1861, p. 50 [Hongkong], 1862, p. 259 [Foochow]; *Blyth, Ibis*, 1862, p. 387; *Maillard, Notes Ile Réunion*, p. 163 (1862); *id. Ibis*, 1863, p. 104; *Gray, List Gallinæ Brit. Mus.* p. 53 (1867); *Swinhoe, Ibis*, 1867, p. 406 [Amoy]; *Anders. Zool. Exped. W. Yunnan, Aves*, p. 672 (1878) [Bhamo].
Perdix (Francolinus) maculatus, *Gray, Zool. Misc.* p. 2 (1831); *id. Fasc. B. China*, pl. 7 (1871).
Perdix phayrei, *Blyth, J. A. S. Beng.* xii. p. 1011 (1843).
Perdix sinensis, *Spalowsk. Vög.* t. 31.
Francolinus sinensis, *Blyth, Cat. B. Mus. As. Soc.* p. 251 (1849); *Gould, P. Z. S.* 1859, p. 151 [Siam]; *Swinhoe, P. Z. S.* 1863, p. 307 [S. China]; *id. Ibis*, 1870, p. 359 [Is. of Hainan]; *id. P. Z. S.* 1871, p. 400 [Canton to Amoy]; *Wardlaw Ramsay, Ibis*, 1875, p. 350 [Karen-nee]; *id. Ibis*, 1877, p. 468.
Francolinus pintadeus, *Blyth, Cat. B. Mus. As. Soc.* p. 250 (1849).
Francolinus phayrei, *Blyth, J. A. S. Beng.* xxiv. p. 480 (1855); *Blanford, Ibis*, 1870, pp. 463, 469 [Irrawaddy Valley]; *Blyth & Wald. Mamm. & B. Burma*, p. 149 (1875).
Francolinus madagascariensis, *Hartl. Orn. Beitr. F. Madag.* p. 69 (1861); *Newton, Ibis*, 1861, p. 274 [Mauritius]; *Hartl. Vög. Madag.* p. 280 (1877).
Francolinus pictus, *Schomburgk, Ibis*, 1864, p. 263 [Siam].
Francolinus pintadeanus, *Gray, List Birds*, pt. v. *Gall.* p. 54 (1867); *id. Hand-l. B.* ii. p. 266, no. 9683 (1870); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 305 (1891).
Francolinus chinensis, *Gray, Hand-l. B.* ii. p. 266, no. 9681 (1870) *id. Fasc. B. China*, p. 6 (1871); *Hume, Nests & Eggs Ind. B*

p. 539 (1873); *Hume, Str. F.* iii. p. 171 (1875) [Upper Pegu]; *David & Oustal. Ois. Chine*, p. 400 (1877) [Cochin China, S. China, Is. of Hainan]; *Hume, Str. F.* vi. p. 443 (1878) [Karen-nee Hills]; *Hume & Marshall, Game B. India*, ii. p. 27, pl. (1879) [Tonquin]; *Oates, B. Brit. Burmah*, ii. p. 323 (1883); *id. ed. Hume's Nests & Eggs*, iii. p. 431 (1890); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 301 (1891); *Grant, Ibis*, 1892, p. 39.

Adult male. Differs from the male of *F. pictus* in having the crown of the head surrounded by a band of rufous buff; the scapulars are chestnut or chestnut and black spotted with white; the buff spots and bars on the primaries and secondaries much reduced in size; the centre pair of tail-feathers have the last third uniform black like the outer pairs; the lores and superciliary stripe black; a black band from the gape, which runs down the side of the throat and surrounding the ear-coverts joins the superciliary; the rest of the sides of the face, chin, and throat pure white; and the under tail-coverts rufous buff. Iris dark brown; bill black; legs dusky orange. Total length 12·6 inches, wing 5·5, tail 2·8, tarsus 1·6.

The *immature male* resembles the adult female, but the scapulars are mixed with chestnut and the feathers of the chest and upper breast are partly ocellated like those of the adult male.

Adult female. Differs from the male in having the upper back, scapulars, and wing-coverts black, margined with brownish and with short transverse bars and spots of buff; the scapulars not conspicuously mixed with chestnut, though most of them have a chestnut stripe down the outer half of the shaft; the lower back, rump, and upper tail-coverts black, tipped with brownish buff and barred with pale buff; the sides of the head washed with rufous buff; and the underparts whitish buff, barred with black. Total length 12·3 inches, wing 5·6, tail 3, tarsus 1·5.

In the *immature female* the rufous-buff band surrounding the crown is not developed. The feathers of the neck, chest, and upper back have wide buff shaft-stripes, and the black bars on the underparts are broken and irregular.

Hab. Indo-Chinese countries: Burma, Siam, Cochin China, Hainan, and S. China. Not found in Tenasserim or the Malay Peninsula. Madagascar?, Réunion, and Mauritius [introduced].

a, b. ♂ ad. sk.	Karennee, March (*R. G. W.* *R.*).	Tweeddale Coll.
c. ♂ ad. sk.	Tonghoo.	Tweeddale Coll.
d. ♂ ad. sk.	60 miles from Tonghoo.	Tweeddale Coll.
e–g. ♂ ad. etimm. sk.	Thayetmyo, Sept. (*R. G. W.* *R.*).	Tweeddale Coll.
h–k. ♂ ♀ ad. et imm. sk.	Thayetmyo, March, April, June (*E. W. Oates*).	Hume Coll.
l. ♀ ad. sk.	Thayetmyo, Jan.	E. W. Oates, Esq. [C.].
m. ♂ ad. sk.	Thoungyeen River, April.	C. T. Bingham, Esq. [P.].
n–p. ♂ ♀ ad. sk.	Siam (*Schomburgk*).	Gould Coll.
q, r. ♂ ad. sk.	Bangkok, March, April (*Capt. Conrad*).	Dr. R. B. Sharpe [P.].

s. ♂ ad. sk.	Cambodia, Sept.	M. E. Pierre [P.].
t. ♂ ad. sk.	Cambodia.	M. Mouhot [C.].
u. ♀ imm. sk.	Saigon, April (*Conrad*).	Dr. R. B. Sharpe [P.].
v, *w.* ♂ ad. sk.	Hainan, March (*R. Swinhoe*).	Tweeddale Coll.
x, *y.* ♂ ad. sk.	Canton (*Col. Tuckett*).	Tweeddale Coll.
z–*b'.* ♂ ad. sk.	Amoy, May, July (*R. Swinhoe*).	Hume & Tweeddale Colls.
c'. ♂ ad. sk.	Fungan, June (*Col. Tuckett*).	Tweeddale Coll.
d'. ♀ imm. sk.	Fokien, Oct. (*R. Swinhoe*).	Hume Coll.
e', *f'.* ♂ imm. sk.	China.	J. R. Reeves, Esq. [P.].
g', *h'.* ♂ ♀ ad. sk.	Mauritius (*Bewsher*).	Shelley Coll.
i', *k'.* ♂ ad. sk.	Mauritius, Oct.	Gould & Zool. Soc. Colls.
l'. ♂ ad. skeleton.	China.	J. R. Reeves, Esq. [P.].

3. Francolinus pictus.

Pintado Partridge, var. A, *Lath. Gen. Syn.*, *Suppl.* i. p. 212 (1787).
Perdix picta, *Jard. & Selb. Ill. Orn.* pl. 50; *Jard. Nat. Lib.*, *Orn.* iv. p. 103, pl. iii. (1834).
Perdix hepburnii, *J. E. Gray*, *Ill. Ind. Zool.* i. pl. 55. fig. 1 (1830–32).
Perdix hepburnii, var. pallida, *J. E. Gray*, *Ill. Ind. Zool.* i. pl. 55. fig. 2 (1830–32).
Francolinus pictus, *Gray*, *Gen. B.* iii. p. 505 (1846); *id. List Gall. B.* iii. p. 36 (1844); *Blyth*, *Cat. B. Mus. As. Soc.* p. 251 (1849); *Jerd. B. Ind.* ii. p. 561 (1863); *Gray*, *List Gallinæ Brit. Mus.* p. 54 (1867); *Blanf. J. A. S. Beng.* xxxvi. p. 200 (1867) [Guzerat & Kutch]; *Blyth*, *Ibis*, 1867, pp. 157, 158; *Beavan*, *Ibis*, 1868, p. 383 [Gwalior, N.W. Provinces]; *Gray*, *Hand-l. B.* ii. p. 266, no. 9682 (1870); *Holdsw. P. Z. S.* 1872, p. 469 [Ceylon]; *Hume*, *Nests & Eggs Ind. B.* p. 538 (1873); *Lloyd*, *Ibis*, 1873, p. 415 [Kattiawar]; *Butler*, *Str. F.* iv. p. 6 (1876) [Aboo]; *Fairbank*, *Str. F.* iv. p. 262 (1876) [Deccan]; *Butler*, *Str. F.* v. p. 211 (1877) [Aboo, N. Guzerat]; *Ball*, *Str. F.* v. p. 419 (1877) [Mahanadi & Godaveri rivers]; *Davidson & Wenden*, *Str. F.* vii. p. 87 (1878) [Deccan]; *Ball*, *Str. F.* vii. p. 225 (1878) [Raipur]; *Hume & Marshall*, *Game B. India*, ii. p. 19, pl. (1879); *Butler*, *Cat. B. Sind*, p. 54 (1879); *Wardlaw Ramsay*, *Ibis*, 1880, p. 70; *Legge*, *B. Ceylon*, iii. p. 744 (1880); *Butler*, *Cat. B. S. Bombay*, p. 68 (1880); *Vidal*, *Str. F.* x. p. 160 (1881) [Karli, W. Ghauts]; *Davidson*, *Str. F.* x. p. 316 (1882) [W. Khandeish]; *Swinhoe & Barnes*, *Ibis*, 1885, p. 131 [Central India]; *Macgregor*, *Str. F.* x. p. 440 (1887) [Deccan & S. Mahratta]; *Taylor*, *Str. F.* x. p. 530 (1887) [not known in Orissa]; *Oates*, *ed. Hume's Nests & Eggs*, iii. p. 430 (1890); *Schaeck. Mém. Soc. Zool. Fr.* iv. p. 303 (1891); *Grant*, *Ibis*, 1892, p. 40.

Adult male. Upper parts, wings, and tail very similar to those of *F. francolinus*, but there is no trace of a chestnut collar, and the feathers of the lower part of the neck, like those of the upper back, are black with submarginal pairs of white ocelli. The sides of the head and forehead dull rust-red; chin and throat paler and more or less spotted with black; feathers surrounding the upper parts of the neck rufous buff, with black shaft-stripes. Rest of underparts

black, with one or more pairs of submarginal white ocelli on each feather; centre of belly and thighs buff; flanks buff, barred with black; under tail-coverts deep chestnut. Iris dark brown; bill dark horny brown; legs and feet yellowish orange. Total length 11·6 inches, wing 5·3, tail 2·3, tarsus 1·7.

Adult female. Resembles the male, but the chin and throat are paler and not spotted with black. Iris dark brown; bill dark horny above, pale whitish flesh below; legs and feet yellowish orange. Total length 11·6 inches, wing 5·3, tail 2·5, tarsus 1·7.

In *younger specimens* the whole of the underparts are whitish buff, barred with black.

Hab. Western and Central India, ranging west to N. Guzerat, north to Hamirpur, and south as far as Karli, W. Ghauts, and Masulipatam, also to Ceylon.

a. ♂ ad. sk.	Gondul, March.	Capt. Lloyd [P.].
b, *c*. ♂ ad. sk.	Deesa, July, Aug. (*E. A. Butler*).	Hume Coll.
d. ♂ ad. sk.	Ahmedabad, Feb. (*H.C. Spry*).	Hume Coll.
e. ♂ ad. sk.	Mt. Aboo, May.	Hume Coll.
f. ♀ ad. sk.	Neemuch, Aug.	Major Yerbury [P.].
g. ♂ ad. st.	[N.W. Provinces.]	Capt. S. Pinwill [P.].
h–*n*. ♂ ♀ ad. sk.	Jhansie Dist., May, Aug., Oct. (*A. O. H.*).	Hume Coll.
o. ♂ ad. sk.	Hammirpur.	Hume Coll.
p, *q*. ♂ ad. sk.	[Behar.]	B. H. Hodgson, Esq. [P.].
r–*t*. ♂ ad. sk.	Saugor, July, Aug.	Hume Coll.
u. Ad. sk.	Saugor (*W. T. Hooper*).	India Museum [P.].
v. ♀ ad. sk.	Raipur.	Hume Coll.
w, *x*. Ad. sk.	Khandeish.	Tweeddale Coll.
y, *z*. ♂ ad. sk.	Khandeish, March (*J. Davidson*).	Hume Coll.
a', *b'*. Ad. sk.	Deccan (*Lt. Burgess*).	Gould Coll.
c', *d'*. Ad. sk.	Deccan (*Col. Sykes*).	India Museum [P.].
e', *f'*. ♂ ♀ ad. sk.	Belgaum, Sept. (*E. A. Butler*).	Hume Coll.
g'. Ad. sk.	Masulipatam, April (*J. E. Honfalall*).	Hume Coll.
h'. ♀ imm. sk.	Ceylon, May (*W. V. Legge*).	Dr. R. B. Sharpe [P.].
i'. Ad. skeleton.	India.	

Hybrid between Francolinus francolinus *and* F. pictus. *See* p. 135

4. Francolinus lathami.

Leona Partridge, *Lath. Gen. Hist.* viii. p. 273 (1823).

Francolinus lathami, *Hartl. J. f. O.* 1854, p. 210 [Sierra Leone], 1855, p. 100; *id. Orn. W.-Afr.* p. 202 (1857) [Aguapim]; *Gray, List Gallinæ Brit. Mus.* p. 55 (1867); *Sharpe, Ibis*, 1869, p. 387 [Fantee]; *Ussher, Ibis*, 1874, p. 71; *Reich. J. f. O.* 1877, p. 13 [Loango Coast]; *Sharpe & Bouvier, Bull. Soc. Zool. Fr.* iii. p. 79 (1878) [Congo R.]; *Bocage, Orn. Angola*, p. 411 (1881) [N. of the Congo R.]; *Büttikofer, Notes Leyd. Mus.* vii. p. 231 (1885) [W. Liberia], viii. p. 265 (1886); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 386 (1891); *Grant, Ibis*, 1892, p. 40.

Francolinus peli, *Temm. Bijdr. tot de Dierk.* l. p. 50, pl. (1854) [Dabocrom].
Peliperdix lathami, *Bonap. C. R.* xlii. p. 882 (1856).
Perdicideus lathami, *Hein. J. f. O.* 1860, p. 198.

Adult male. Top of the head olive-grey, shading into grey on the forehead and margined with white; upper back dark olive-brown, each feather with a wide white shaft-stripe, edged externally with black; middle back, scapulars, and wing-coverts, except the primary-coverts, olive-brown, widely edged with chestnut, mostly dotted or marked with black and with white shafts; lower back, rump, and upper tail-coverts olive-brown, with paler margins and markings. Primaries, primary-coverts, and secondaries dark brown, the middle part of the outer webs of the primaries margined with white; the outer webs of the secondaries margined with chestnut and buff, and in the outer ones barred and marked with chestnut; a black band commences on the lores, and passing through the eye circumscribes the top of the head, dividing it from the grey cheek, ear-coverts, and sides of the neck. Chin, throat, and front of neck black. Chest and breast black, each feather with a white heart-shaped subterminal spot. Sides and flanks olive-brown, with white black-edged shaft-stripes. Belly and under tail-coverts whitish buff, the latter more or less spotted and barred with black. Centre tail-feathers like the upper tail-coverts; three outer pairs blackish brown, marked with rufous and tipped with white. Total length 10 inches, wing 5·6, tail 2·7, tarsus 1·7.

Adult female differs from the male in having the whole ground-colour of the top of the head and upper parts olive-brown, faintly and irregularly barred with rufous buff and black, many of the scapulars and wing-coverts blotched with black; and the chest- and breast-feathers are widely margined outside the black with brown. Total length 9·5 inches, wing 5·4, tail 2·4, tarsus 1·6.

Young birds resemble the female, but the chin and throat are white; the general colour of the upper parts is much more uniform; the scapulars, secondaries, lesser and median coverts are mostly dull chestnut; the scapulars and coverts each with an oval or irregular black blotch, edged internally with buff at the inner web. The feathers on the underparts are whitish, with a wide black margin on each side. *Nestlings* have the top of the head, back, and rump deep chestnut; no white shafts to the feathers of the upper parts, but most of the scapulars and lesser and median coverts have a white triangular dot at the extremity of the shaft; otherwise the plumage is much the same as the above.

Hab. Loango Coast, Gaboon, Gold Coast, Liberia, Sierra Leone, and Senegambia.

a, *b*. ♂ ♀ ad. st.	W. Africa.	Purchased.
c. ♂ ad. sk.	W. Africa.	Purchased.
d. ♂ ad. sk.	Coast of Guinea.	Purchased.
e. ♀ ad. sk.	Gold Coast (*T. E. Buckley*).	Shelley Coll.
f. ♂ ad. sk.	Fantee (*Gov. Ussher*).	Shelley Coll.
g, *h*. Pull. sk.	Fantee.	Dr. R. B. Sharpe[P.]

i–m. ♀ ad. et juv. sk.	Kaizaraku, Denkera, April, Oct. (*Gov. Ussher*).	Shelley Coll.
n. ♂ ad. sk.	Accra, Feb. (*G. E. S.*).	Shelley Coll.
o, p. ♂ ♀ ad. sk.	Gaboon (*Du Chaillu*).	Tweeddale Coll.
q, r. ♂ ♀ ad. sk.	Gombe, Quillon River, June (*Dr. Lucan*).	Shelley Coll.

5. Francolinus pondicerianus.

La Perdrix du Pondichery, *Sonnerat, Voy. aux Indes*, ii. p. 165 (1782).

Pondicherry Partridge, *Lath. Gen. Syn.* ii. p. 774 (1783), *Suppl.* i. p. 221 (1787); *id. Gen. Hist.* viii. p. 279 (1823).

Tetrao pondicerianus, *Gmel. Syst. Nat.* i. pt. ii. p. 760 (1788).

Perdix ponticeriana, *Lath. Ind. Orn.* ii. p. 649 (1790); *Temm. Pl. Col.* v. pl. 32 (1823); *Less. Traité d'Orn.* p. 505 (1831); *Blyth, Cat. B. Mus. As. Soc.* p. 252 (1849).

Perdix pondiceriana, *Bonn. Tabl. Encycl. Méth.* i. p. 211 (1791); *Temm. Pig. et Gal.* iii. pp. 332, 722 (1815); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 239 (1817).

Francolinus pondicerianus, *Steph. in Shaw's Gen. Zool.* xi. p. 321 (1819); *Gray, Gen. B.* iii. p. 505 (1846); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 307 (1891); *Grant, Ibis*, 1892, p. 40.

Perdix orientalis, *J. E. Gray, Ill. Ind. Zool.* pl. 56. fig. 2 (1830–32); *Hodgs. Gray, Zool. Misc.* p. 85 (1844); *id. Icon. ined. in Brit. Mus.* no. 379 [Nepal].

Francolinus ponticerianus, *Gray, List Gall. B.* iii. p. 35 (1844); *Layard, Ann. Mag. N. H.* (2) xiv. p. 107 (1854) [N. Ceylon]; *Burgess, P. Z. S.* 1855, p. 31; *Adams, P. Z. S.* 1859, p. 186 [low hills bordering Punjab]; *Newton, Ibis*, 1861, p. 275 [Mauritius]; *Gray, List Gallinæ Brit. Mus.* p. 54 (1867); *id. Hand-l. B.* ii. p. 266, no. 9684 (1870); *Hartl. Vög. Madag.* p. 282 (1877) [Bourbon and Rodriguez]; *Sharpe, Rep. Zool. Coll. 'Alert,'* pt. ii. p. 483 (1884).

Ortygornis ponticeriana, *Jerd. B. Ind.* ii. p. 569 (1863); *Holdsw. P. Z. S.* 1872, p. 469 [N. Ceylon]; *Hume, Str. F.* i. p. 227 (1873) [Sindh]; *Adam, Str. F.* i. p. 392 (1873) [Sambhur Lake]; *Ball, Str. F.* ii. p. 427 (1874) [Chota Nagpur], iii. p. 209 (1875) [Dera Ghazi Khan]; *Fairbank, Str. F.* iv. p. 262 (1876) [Deccan]; *Hume, Str. F.* iv. p. 459 (1876); *Blanf. E. Persia*, ii. p. 273 (1876) [Baluchistan & S. Persia]; *Davidson & Wenden, Str. F.* vii. p. 87 (1878) [Deccan]; *Ball, Str. F.* vii. p. 225 (1878) [Ganges to Godaveri].

Ortygornis pondiceriana, *Hume, Nests & Eggs*, p. 542 (1873); *Rey, J. f. O.* 1875, p. 292; *Butler, Str. F.* iv. pp. 6, 35 (1876) [Aboo & N. Guzerat]; *Fairbank, Str. F.* v. p. 409 (1877) [Palani Hills]; *Legge, B. Ceylon*, iii. p. 748 (1880) [N. Ceylon].

Ortygornis pondicerianus, *Hume & Marshall, Game B. India*, ii. p. 51, pl. (1879); *Doig, Str. F.* viii. p. 371 (1879) [E. Narra]; *Butl. Cat. B. S. Bombay*, p. 69 (1880); *Reid, Str. F.* x. p. 62 (1881) [Lucknow]; *Davidson, Str. F.* x. p. 317 (1882) [W. Khandeish]; *Davison, Str. F.* x. p. 410 (1883) [Nilghiris, Mysore]; *Sharpe, Ibis*, 1886, p. 166 [Muscat]; *Macgregor, Str. F.* x. p. 440 (1887) [Deccan & Mahratta Country]; *Taylor, Str. F.* x. p. 465 (1887) [Mysore]; *Oates, ed. Hume's Nests & Eggs*, iii. p. 435 (1890).

Ortygornis ponticerianus, *Butler, Cat. B. Sind*, p. 55 (1879).

Adult male and female. Forehead rufous; top of the head umbre-brown; neck whitish grey with narrow black bars; back, rump, scapulars, and wing-coverts a mixture of chestnut and brown, barred with buff and mostly with white shafts, some of the scapulars with the ground-colour of the inner web blackish brown; upper tail-coverts brown barred with buff; primaries and secondaries brownish grey, the basal part of the outer web of the outer primaries and nearly the whole of the outer web of the inner primaries and secondaries barred and mottled with rufous. Superciliary stripe and cheeks rufous buff; ear-coverts chestnut-brown; lores whitish; a band of feathers from the gape to the back of the eye edged with black; centre of chin and throat rufous buff, margined all round by first an indistinct black and then a pale buff band, the black band forming a patch at the base of the throat; chest a mixture of buff and rufous, with narrow somewhat irregular blackish bars; rest of the underparts pale buff, with irregular wavy transverse lines of black, some of the feathers on the sides spotted with chestnut; centre of belly often uniform buff; centre pair of tail-feathers like the upper tail-coverts, outer pairs chestnut, shading into black towards the extremity, and tipped with greyish buff: iris dark brown; bill horny brown, pale flesh below; legs and feet dull red. A sharp pair of spurs in the male. Total length 12·5 inches, wing 5·8, tail 3·5, tarsus 1·6.

The *immature males* and *females* differ only from the adult in having the throat white, the upper part of the outer webs of the outer primaries marked with buff, and no spurs.

Hab. India, Ceylon, Afghanistan, Baluchistan, S. Persia, and Arabia. Amirantes and Mascarenhas Is. (introduced).

a. ♂ imm. sk.	Muscat.	Col. Mills [P.].
b–g. ♂ ♀ ad. sk.	Afghanistan (*W. Griffith*).	India Museum [P.].
h, i. ♂ ad. et imm. sk.	Sindh.	Gould Coll.
j. ♀ ad. sk.	Karachi, Jan. (*E. A. Butler*).	Hume Coll.
k. ♀ ad. sk.	Mehur, Upper Sindh, Jan. (*A. O. H.*).	Hume Coll.
l. ♀ ad. sk.	Sukkur, Dec. (*A. O. H.*).	Hume Coll.
m. ♂ ad. sk.	Sehwan Hills, Jan. (*A. O. H.*).	Hume Coll.
n. ♂ ad. sk.	Kattiawar, May.	Capt. Lloyd [P.].
o–q. ♂ ♀ ad. sk.	Jodhpur, Jan., Feb.	Hume Coll.
r. ♀ ad. sk.	Ajmere, Jan.	Hume Coll.
s–x. ♂ ♀ ad., imm., et pull. sk.	Sambhur, April, May, June, Dec. (*R. M. Adam*).	Hume Coll.
y. ♀ ad. sk.	Murdan, Feb. (*J. R. Johnson*).	Hume Coll.
z–f′. ♂ ♀ ad. sk.	Gurgaon Dist., Jan., Feb., March, Aug. (*A. O. H. & W. N. Chill*).	Hume Coll.
g′, h′. ♂ ♀ ad. sk.	Bewur, Mynpuree Dist., Jan. (*A. Anderson*).	Hume Coll.
i′–l′. ♂ ♀ ad. sk.	Oudh, Nov., Dec., Jan.	Hume Coll.
m′. ♀ ad. sk.	Rahunabad, Lucknow Dist., Nov. (*G. Reid*).	Hume Coll.
n′, o′. ♀ ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.].

p', *q'*. ♂ ad. sk.	Darjeeling.	India Museum [P.].
r', *s'*. ♂ ad. et pull. sk.	Maunbhoom, March, April (*R. C. Beavan*).	Tweeddale Coll.
t'. ♂ ad. sk.	Saugor (*W. T. Hooper*).	India Museum [P.].
u'. ♂ ad. sk.	Satpura Hills, Feb.	Hume Coll.
v'. ♂ ad. sk.	Deccan (*Col. Sykes*).	India Museum [P.].
w'–a''. ♂ ♀ ad. sk.	Ahmednugger Dist., Feb., Dec. (*S. B. Fairbank*).	Tweeddale Coll.
b'', *c''*. ♂ ♀ ad sk.	Belgaum, Oct. (*E. A. Butler*).	Hume Coll.
d'', *e''*. ♂ imm.; ♀ ad. sk.	Mysore, Oct., Nov.	W. Davison, Esq. [P.].
f'', *g''*. ♂ ad. sk.	Madras.	Hume & Gould Colls.
h''. ♂ ad. sk.	Tuticorin, March.	Hume Coll.
i''. ♀ ad. sk.	India.	India Museum [P.].
k'', *l''*. ♂ ad. sk.	Eagle Is., Amirantes, March.	Dr. Coppinger [P.].
m''–o''. ♀ ad. et imm. sk.	Rodriguez.	H. H. Slater, Esq. [C.].
p''. Sternum.	Rodriguez.	H. H. Slater, Esq. [C.].

q''. Imperfect skeleton.
r''. Skeleton.

6. Francolinus coqui.

Perdix coqui, *Smith, Rep. Exp. Cent. Afr.* p. 55 (1836) [Kurrichaine].

Francolinus subtorquatus, *Smith, Ill. Zool. S. Afr.* pl. 15 (1838); *Gray, List Gall. B.* iii. p. 35 (1844); *id. Gen. B.* iii. p. 505 (1846); *Gurney, Ibis*, 1860, p. 215 [Natal]; *id. P. Z. S.* 1864, pp. 3, 6 [Damaraland]; *Gray, List Gallinæ Brit. Mus.* p. 50 (1867); *Layard, B. S. Afr.* p. 273 (1867) [Orange Free State]; *Gurney, Ibis*, 1868, p. 467 [Limpopo R.]; *Gray, Hand-l. B.* ii. p. 265, no. 9658 (1870); *Buckley, Ibis*, 1874, p. 386 [Transvaal & Matabele]; *Shelley, Ibis*, 1875, p. 85 [Durban]; *id. Ibis*, 1882, p. 361 [Matabele]; *Sharpe, ed. Layard's B. S. Afr.* p. 600 (1884); *Ayres, Ibis*, 1884, p. 232 [Transvaal], 1886, p. 293 [Limpopo R.], 1887, p. 61 [Umzeilla's Country]; *Büttikofer, Notes Leyd. Mus.* x. p. 242 (1875) [Humpata, Mossamedes], xi. p. 80 (1889); *Reich. J. f. O.* 1891, p. 143 [Unyamuezi]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 349 (1891).

Chœtopus subtorquatus, *Bonap. C. R.* xlii. p. 882 (1856).

Scleroptera subtorquata, *Gurney ed. Anderss. B. Damara L.* p. 246 (1872) [Okavango R.].

Francolinus schlegeli, *Bocage (nec Heugl.), J. Sc. Lisb.* vii. p. 94 (1879); *id. Orn. Angola*, p. 407 (1881) [Benguela]; *Sharpe, ed. Layard's B. S. Afr.* p. 602 (1884).

Francolinus semitorquatus, *Ayres, Ibis*, 1880, p. 110 [Rustenburg].

Francolinus coqui, *Böhm, J. f. O.* 1882, p. 194 [Kakoma]; *Schalow, J. f. O.* 1883, p. 341; *Matschie, J. f. O.* 1887, p. 147 [Marungu]; *Shelley, P. Z. S.* 1889, p. 370 [Duruma]; *Grant, Ibis*, 1892, p. 41; *Sharpe, Ibis*, 1892, p. 550 [Gulu-gulu].

Francolinus sp., *Böhm, J. f. O.* 1885, p. 40 [Gonda].

Francolinus stuhlmanni, *Reich. J. f. O.* 1889, p. 270 [Usegua]; *Hartl. Abh. nat. Ver. Brem.* xii. p. 40 (1891).

Adult male. Top of the head and ear-coverts chestnut-brown, rest of the head and nape rufous buff, usually paler on the chin and throat and in some specimens white; neck, chest, and rest of underparts white, shading into buff on the belly, flanks, and under tail-

coverts, and widely barred with black. Some of the flank-feathers are blotched on the outer web with chestnut; rest of the upper parts, scapulars, and wing-coverts (except the greater primary-coverts) a mixture of chestnut and buff, with wide bars of black or dark grey, interrupted on the back, rump, and scapulars by rather wide buff shaft-stripes; primaries, primary-coverts, and secondaries greyish black, the latter barred with rufous on the outer web; tail rufous buff, barred with greyish black. In some specimens the bars on the under tail-coverts are obsolete and in others nearly so. Iris light hazel-brown; bill dark ashy horny, yellow at gape; tarsi and feet dark bright yellow; a well-developed pair of spurs. Tota length 11 inches, wing 5·5, tail 3, tarsus 1·5.

Adult female. Differs from the male in having a black superciliary streak passing down the side of the neck, a second commencing on the lores passes along the side of the throat and joining that from the other side completely circumscribes the throat with a black line; neck and chest dull chestnut, mixed with grey and with white shafts; the rest of the upper parts sometimes greyer, with the bars and markings less regular: iris bright hazel; bill dusky, basal part chrome-yellow; tarsi and feet bright chrome. No spurs.

Immature male has the black superciliary and malar stripes of the female partially developed, the outer webs of the primaries are narrowly margined and marked with buff; otherwise the plumage is the same as that of the adult male.

In a *still younger bird* the plumage is nearly like the females, but the chest is mixed with the white and black barred feathers of the adult.

In *quite young examples* the shaft-streaks on the upper parts are stronger than in the adults; there are no traces of black lines on the sides of the head; the chin and throat are whitish, and the rest of the underparts are more or less barred and spotted with black.

Hab. East, South, and South-west Africa.

a, b. ♂ ♀ ad. sk.	Duruma, Aug.	H. C. V. Hunter, Esq. [P.].
c. ♀ ad. sk.	Zambesi.	Dr. Bradshaw [C.].
d. ♀ ad. sk.	Lehtaba, Umzeilla's Country, May (*W. Ayres*).	J. H. Gurney, Esq. [P.].
e. ♂ ad. sk.	Bamangwato, July (*T. E. Buckley*).	Shelley Coll.
f. ♂ imm. sk.	Limpopo River, July (*T. Ayres*).	Shelley Coll.
g. ♂ ad. sk.	Limpopo River, Aug. (*T. Ayres*).	J. H. Gurney, Esq. [P.].
h. ♀ ad. sk.	Tropic of Capricorn, S. Africa.	Sir A. Smith [C.]. (Type of the species.)
i, k. ♀ ad. et juv. sk.	Rustenburg, Aug., Dec. (*T. Ayres*).	J. H. Gurney, Esq. [P.].
l. ♂ ad. sk.	Potchefstroom, Nov. (*T. Ayres*).	Shelley Coll.
m. ♂ ad. sk.	Spitzkop, near Potchefstroom, April (*T. Ayres*).	Shelley Coll.

n. ♂ ad. sk.	Natal (*Gordge*).	Shelley Coll.
o. ♀ ad. sk.	Natal.	J. H. Gurney, Esq. [P.].
p. Juv. sk.	Durban, March (*G. E. S.*).	Shelley Coll.
q, r. ♂ ♀ ad. sk.	Pinetown, March, June (*G. E. S. & T. L. Ayres*).	Shelley Coll.
s. ♀ ad. st.	Cape of Good Hope.	Purchased.
t. ♂ ad. st.	S. Africa.	Gould Coll.
u. ♂ imm. sk.	Damaraland.	Shelley Coll.

7. Francolinus schlegeli.

Francolinus schlegelii, *Heugl. J. f. O.* 1863, p. 275 [Bongo], 1864, p. 271 [Djur and Kosanga R.]; *id. Peterm. Geogr. Mitth.* 1869, p. 415; *id. Orn. N.O.-Afr.* ii. p. 898, pl. xxx. (1873); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 379 (1891) [part.]; *Grant, Ibis*, 1892, p. 41.

? Francolinus buckleyi (*Shelley*), *Grant, Ibis*, 1892, p. 41 [Accra].

Adult male. Top of the head and back of the neck as far as the nape reddish brown; ear-coverts blackish brown; rest of the head and neck buff, palest on the throat and darkest on the nape. Back and scapulars light red mixed with brownish grey, with whitish or buff shaft-streaks edged with black and irregular narrow transverse black markings across the webs. Scapulars have a large blackish-brown patch covering the middle third of the inner web. Shoulders and wing-coverts light red. Rump and upper tail-coverts buff, irregularly barred and vermiculated with blackish grey. Primaries brownish grey; secondaries with the outer web light red, the inner brownish grey. Tail light red. Chest, breast, belly, and flanks white, with transverse bars of black, some of the latter with light red and chestnut black-edged spots on the outer webs. Thighs and vent white. Under tail-coverts pale buff, with a few wide-set, very narrow blackish bars. A pair of sharp spurs on the tarsi.

Hab. Bongo, Equatorial Africa, and perhaps Accra on the West Coast.

In Captain Shelley's collection there are two female specimens which were obtained by him at Accra in 1872 and may belong to the present species. They differ from the female of *F. coqui* in having the black lines over the eye and round the throat almost obsolete, the greater part of the basal two-thirds of the inner primaries and secondaries chestnut, and the general tone of the top of the head and upper parts dull grey, with only narrow bars of rufous buff here and there. Possibly these birds may represent a distinct species, but in the absence of male specimens it is impossible to say. Should the Accra bird prove new, the species may stand as *Francolinus buckleyi*, a MS. name given by Captain Shelley, who believes his birds to be distinct.

? *a, b.* ♀ ad. sk.	Accra, Feb. (*G. E. S.*).	Shelley Coll.

8. Francolinus streptophorus. (Plate I.)

Francolinus streptophorus, *Grant, Ibis*, 1891, p. 126 [Elgon]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 361 (1891); *Grant, Ibis*, 1892, p. 42; *Sharpe, Ibis*, 1892, p. 550.

Adult male. Top of the head, ear-coverts, back, wings, rump, upper tail-coverts, and tail umber-brown, the lower back, rump, and scapulars also largely blotched with rich dark brown on one or both webs, and mostly with white shaft-stripes. Lores, superciliary stripes, and sides of the face and throat, nape and sides of neck bright chestnut. A narrow white band separates the superciliary stripe from the top of the head, and a second parallel band running from below the eye along the side of the head divides the hinder part of the cheek and sides of throat from the ear-coverts. Chin and throat white, some of the feathers tipped with chestnut. Mantle and upper chest barred with black and white, and forming a wide ring round the upper parts, which contrasts strongly with the rest of the plumage. Lower chest and rest of underparts pale buff, the former crossed with wavy black bars only, and the latter, especially on the sides and flanks, with large oblong black blotches on one or both webs of the feathers. Outer tail-feathers darker brown than the middle pair. Iris bright brown. Bill dusky; gape and base of lower mandible yellow. Legs dull yellow. No spur. Total length 11 inches, wing 6·2, tail 2·7, tarsus 1·55.

Adult female. Differs from the male in having the back, rump, and upper tail-coverts barred with buff, and the wing-coverts spotted with the same colour. Basal part of the outer web of the inner primaries and the outer webs of the secondaries clouded along the margin with buff. Total length 10·8 inches, wing 5·9, tail 2·5, tarsus 1·5.

Hab. South foot of Mount Elgon and Masailand; Central East Africa.

a. ♂ ad. sk.	Mount Elgon, March.	F. J. Jackson, Esq. [P.]. (Type of the species.)

9. Francolinus sephæna.

Perdix sephæna, *Smith, Rep. Exp. Cent. Afr.* p. 55 (1836) [Marikwa and Limpopo R.].

Francolinus pileatus, *Smith, Ill. Zool. S. Afr.* pl. 14 (1838); *Gray, List Gall. B.* iii. p. 35 (1844); *id. Gen. B.* iii. p. 506 (1846); *id. List Gallinæ Brit. Mus.* p. 52 (1867); *Layard, B. S. Afr.* p. 272 (1867); *Ayres, Ibis*, 1869, p. 297 [Limpopo R.]; *Finsch & Hartl. Vög. Ost-Afr.* p. 586 (1870); *Gray, Hand-l. B.* ii. p. 265, no. 9667 (1870); *Heugl. Orn. N.O.-Afr.* ii. p. 890, pl. 29. fig. 2 (1873) [Bechuanaland]; *Ayres, Ibis*, 1873, p. 282 [Transvaal]; *Buckley, Ibis*, 1874, p. 386 [Limpopo to Matabele]; *Bocage, J. f. O.* 1876, p. 305 [Humbe, Mossamedes]; *id. Orn. Angola*, p. 405 (1881); *Sharpe in Oates's Matabele L.* p. 323 (1881) [Crocodile and Gokwe R.]; *Holub u. Pelz. Orn. S. Afr.* p. 186 (1882) [Natal]; *Shelley, Ibis*, 1882, p. 360 [Gokwe R.]; *Sharpe, in Layard's B. S. Afr.* p. 593 (1884); *Fischer, J. f. O.* 1885, p. 119; *Ayres, Ibis*, 1886, p. 292, 1887, p. 61 [Lehtaba R.]; *Schaeck, Mém. Soc. Zool Fr.* iv. p. 355 (1891).

Chœtopus pileatus, *Bonap. C. R.* xlii. p. 882 (1856).

Francolinus sephæna, *Newton*, *Ibis*, 1868, p. 269; *Grant*, *Ibis*, 1892, p. 42.

Scleroptera pileata, *Gurney's ed. Anderss. B. Damaral.* p. 247 (1872) [N. Damaraland].

Adult male. Top of the head umber-brown, with black bases and centres; neck surrounded by a collar of dark chestnut feathers, widely edged with white on either web. Upper back, scapulars, and wing-coverts chestnut, shading into umber-brown in the middle of each feather, and with a wide white shaft-stripe narrowly margined with black; some of the longer scapulars nearly black on the terminal half of the inner web. Lower back, rump, and upper tail-coverts umber-brown. Primaries and secondaries brownish black, the outer webs of the inner primaries with the basal half chestnut and the secondaries with the outer web edged with buff. A narrow black, followed by a wider white, superciliary stripe; a narrow black line from the base of the nostril to the eye, and continued behind the eye above the ear-coverts, which are brown; rest of the sides of the head white, the feathers of the fore part of the cheek tipped with black and the hinder with chestnut. Chin and throat white. Chest buff, with dark chestnut shaft-stripes, widening out into a club-shaped spot at the extremity of each feather; rest of the under-parts buff with pale shafts and finely clouded and pencilled with greyish-black except on the middle of the belly and vent. Centre pair of tail-feathers warm brown, outer pairs nearly black, washed with chestnut towards the base. Iris hazel. Legs and feet red; a long sharp spur on each tarsus. Total length 12 inches, wing 6·5, tail 3·8, tarsus 1·7.

Immature males resemble the adult female, but are provided with a well-developed spur on each tarsus.

Adult female. Differs from the male only in having the middle back, scapulars, and wing-coverts covered with wavy narrow bars of buff and lines of black; the lower back, rump, and upper tail-coverts mottled with black and whitish buff. Iris hazel. Legs red.

Hab. South Africa: on the east from the Marikwa R. and the Transvaal to the Zambesi and westwards to the north of Damaraland.

a. ♂ ad. sk.	Machloutze River, Bamangwato's Country, Aug. (*T. E. Buckley*).	Shelley Coll.
b. ♂ ad. sk.	Transvaal.	J. H. Gurney, Esq. [P.].
c, *d*. ♂ ♀ ad. sk.	Crocodile River, July.	W. E. & C. G. Oates, Esqs. [P.].
e. ♂ ad. sk.	Marikwa River, N.E. of Kurichane.	Sir A. Smith [C.]. (Type of the species.)
f. ♂ imm. sk.	Lehtaba, Umzeilla's Country, May (*W. Ayres*).	J. H. Gurney, Esq. [P.].
g. ♀ ad. st.	South Africa.	

10. Francolinus granti.

Francolinus pileatus, *Rüppell* (*nec Smith*), *Orn. N.O.-Afr.* p. 106 (1845) [Shoa]; *Guér. et Lafr. Ferr. et Gal. Voy. Abyss.* p. 250 (1847); *Heugl. J. f. O.* 1862, p. 413; *Fischer, J. f. O.* 1878, p. 293 [Malindi]; *Fischer & Reich. J. f. O.* 1878, p. 250; *Hartl. Abh. nat. Ver. Brem.* vii. p. 118 (1880) [Lado].

Francolinus, sp., *Sclat. P. Z. S.* 1864, p. 113 [Unyamuezi].

Francolinus granti, *Hartl. P. Z. S.* 1865, p. 665, pl. 39. fig. 1 [Unyamuezi]; *Gray, Hand-l. B.* ii. p. 265, no. 9668 (1870); *Finsch & Hartl. Vög. Ost-Afr.* p. 589 (1870); *Heugl. Orn. N.O.-Afr.* ii. p. 891 (1873); *Fischer, J. f. O.* 1879, pp. 284, 300, 303 [Malindi, Tana R.]; *Fischer & Reich. J. f. O.* 1879, p. 339 [Kipini]; *Sharpe, in Layard's B. S. Afr.* p. 594 (1884); *Fisch. Zeit. ges. Orn.* i. p. 382 (1884) [Paré, Chaga, Kilimanjaro, Ngaruka, Ngurumán); *Fischer, J. f. O.* 1885, p. 119 [Bagamoyo, Pangani, Mombasa, Lamu]; *Reich. J. f. O.* 1887, p. 52 [S. & E. of Victoria Nyanza]; *Shelley, Ibis*, 1888, p. 303 [Taka, Manda Is.]; *id. P. Z. S.* 1888, p. 48 [Lado]; *id. P. Z. S.* 1889, p. 370 [Useri R.]; *Grant, Ibis*, 1890, p. 346; *Hartl. Abh. nat. Ver. Brem.* xii. p. 40 (1891) [Ussambiro]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 358 (1891); *Grant, Ibis*, 1892, p. 42; *Sharpe, Ibis*, 1892, p. 551 [Ulu country & Victoria Nyanza].

Francolinus rovuma, *Gray, List Gallinæ Brit. Mus.* p. 52 (1867) [part. ♂].

Francolinus schoensis, *Heugl. Peterm. Geogr. Mitth.* 1869, p. 415 [Shoa].

Francolinus schoanus, *Heugl. Orn. N.O.-Afr.* ii. p. 891, pl. xxix. fig. 2 (1873); *Salvad. Ann. Mus. Civ. Genov.* xxi. pp. 210, 272 (1884) [Shoa]; *Hartert, Kat. Mus. Senckenb.* p. 195 (1891).

Francolinus ochrogaster, *Hartl. J. f. O.* 1882, p. 327 [Upper Nile]; *id. Beitr. Abh. nat. Ver. Brem.* viii. p. 218 (1882); *Reich. & Schalow, J. f. O.* 1883, p. 409; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 357 (1891).

Francolinus kirki, *Sclat.* (*nec Hartl.*) *P. Z. S.* 1884, p. 389 [Berbera, Somali].

The old and young of both sexes are quite similar in plumage to *F. sephœna*, but the dark chestnut spots do not extend so far down on the chest. In size the present species is also much smaller. In a very old male specimen the lower chest, breast, and rest of the underparts are nearly pure buff, the markings being only very faintly visible on the sides.

Male. Total length 11 inches, wing 5·5, tail 3·5, tarsus 1·7.

Female. Total length 11 inches, wing 5·3, tail 3, tarsus 1·5.

Hab. East Africa from about 5° S. to 10° N. lat. and east of about 31° E. long.

a. ♂ ad. sk.	Shoa (*Harris*).	India Museum [P.].
b–d. ♂ ♀ ad. sk.	Lado, Equatorial Africa, March, April.	Emin Pasha [P.].
e. ♂ ad. sk.	Wakkala, Equatorial Africa, April (*Emin Pasha*).	Shelley Coll. (One of the typical specimens of *F. ochrogaster*, Hartl.)
f. ♀ ad. sk.	Durúma, July.	Dr. F. M. Hildebrandt [C.].
g–i. ♂ ♀ ad. et imm. sk.	Useri River, July.	H. C. V. Hunter, Esq. [P.].

k. ♂ imm. sk.	Taka, Dec.	F. J. Jackson, Esq. [P.].
l. ♀ ad. sk.	Lamu.	F. J. Jackson, Esq. [P.].
m, n. ♂ ad. sk.	Lamu (*Sir J. Kirk*).	Shelley Coll.
o. ♂ ad. sk.	Melinda (*Sir J. Kirk*).	Shelley Coll.
p. ♂ ad. sk.	E. Africa.	Purchased. (One of the types of *F. rovuma*, G. R. Gr.)
q. ♂ ad. sk.	—— ?	Shelley Coll.

11. Francolinus spilogaster.

Francolinus spilogaster, *Salvadori, Ann. Mus. Civ. Genov.* vi. p. 541 (1888) [Harar]; *Grant, Ibis*, 1890, p. 347; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 363 (1891); *Grant, Ibis*, 1892, p. 42.

Adult male. Entirely similar to *F. kirki*, from which it can be distinguished only by its greater size. Wing 6·5 inches.

Hab. N.E. Africa: Harar, Shoa.

12. Francolinus kirki.

Francolinus kirki, *Hartl. P. Z. S.* 1867, p. 827: *Cab. v. d. Decken's Reisen*, i. p. 60 (1869); *Finsch & Hartl. Vög. Ost-Afr.* p. 588, pl. x. fig. 1 (1870); *Fischer, J. f. O.* 1885, p. 120 [Tabora]; *Reich. J. f. O.* 1889, p. 270 [Usegua]; *Grant, Ibis*, 1890, p. 346; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 361 (1891); *Grant, Ibis*, 1892, p. 43.

Francolinus rovuma, *Gray, List Gallinæ Brit. Mus.* p. 52 (1867) [part ♀].

Francolinus granti, *Nicholson, P. Z. S.* 1878, p. 359 [Dar-es-Salaam]; *Shelley, P. Z. S.* 1881, p. 597 [Melinda, Dar-es-Salaam].

Both sexes resemble respectively the male and female of *F. sephæna*, but differ in having a dark chestnut oblong spot at the end of the shaft on the feathers of the breast and belly.

Male. Total length 11 inches, wing 5·7, tail 3·5, tarsus 1·6.

Female. Total length 10·5 inches, wing 5·5, tail 3, tarsus 1·5.

Hab. East Africa, from the Rovuma River to Dar-es-Salaam and Zanzibar Island.

a, b. ♂ ♀ ad. sk.	Dar-es-Salaam (*Sir J. Kirk*).	Shelley Coll.
c. ♀ ad. sk.	Rovuma River (*C. Livingstone*).	Earl Russell [P.]. (One of the types of *F. rovuma*, G. R. Gr.)

13. Francolinus albogularis. (Plate II.)

Francolinus albogularis, *Gray, List Gall. B.* iii. p. 35 (1844) [W. Africa]; *Hartl. J. f. O.* 1854, p. 210 [Gambia]; *id. Orn. W.-Afr.* p. 201 (1857); *Gray, List Gallinæ Brit. Mus.* p. 50 (1867); *id. Hand-l. B.* ii. p. 265, no. 9661 (1870); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 385 (1891); *Grant, Ibis*, 1892, p. 43.

Chœtopus albogularis, *Bonap. C. R.* xlii. p. 882 (1856).

Francolinus albigularis, *Salvin, Cat. Strickl. Coll.* p. 566 (1882).

Adult male. Top of the head rufous brown; nape buff; neck,

upper back, and lesser and median wing-coverts chestnut, most feathers greyer towards the middle, and with white shaft-stripes narrowly margined with black: middle back and scapulars much the same, but heavily blotched and irregularly barred with black; lower back, rump, and upper tail-coverts grey, irregularly spotted and barred with pale rufous and black. Primaries and secondaries and their coverts light chestnut, dark brown at the extremity and along the shaft. Ear-coverts dark brown; sides of the face, chin, and throat white, some of the cheek-feathers tipped with dark brown; neck and rest of underparts uniform buff, with pale shafts; under tail-coverts barred with brown; some of the feathers of the sides and flanks widely edged with chestnut. Centre pair of tail-feathers like the upper tail-coverts, outer pairs chestnut, more or less barred at the extremity with dusky. Bill black, yellow at the base. Legs and feet yellowish. Tarsi with a well-developed pair of spurs. Total length 9 inches, wing 5·2, tail 2·2, tarsus 1·4.

Hab. W. Africa, Gambia, and Casamanze.

a. ♂ ad. sk.	West Africa.	Sir A. Smith [P.].
b. ♂ ad. sk.	West Africa.	Governor Rendall. (Type of the species.)

14. Francolinus spilolæmus. (Plate III.)

Francolinus psilolæmus, *Gray, List Gallinæ Brit. Mus.* p. 50 (1867) [Shoa]; *id. Hand-l. B.* ii. p. 265, no. 9659 (1870); *Heugl. Orn. N.O.-Afr.* ii. p. 897 (1873); *Giglioli, Ann. Mus. Civ. Genov.* xxvi. p. 61 (1888) [Shoa].

Francolinus ptilolæmus, *Heugl. Peterm. Geogr. Mitth.* 1869, p. 415.

Francolinus spilolæmus, *Finsch & Hartl. Vög. Ost-Afr.* p. 586 (1870); *Salvad. Ann. Mus. Civ. Genov.* xxvi. p. 306 (1888); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 374 (1891); *Grant, Ibis*, 1892, p. 43.

Adult male. Top of the head black, edged with pale brown; nape buff, barred and spotted with black. Rest of the upper parts umber-brown, blotched on one or both webs with black and with buff shaft-streaks and bars of buff on either web. Ear-coverts dull chestnut. Lores, superciliary stripes, sides of face, neck, and chest buff, tipped with black. Chin and throat white, each feather with a round subterminal black spot. Breast and belly buff, each feather with a V-shaped black mark near the extremity of the shaft and, as it were, supporting a chestnut blotch on the branch which goes to the outer web. On some of the flank-feathers the chestnut blotches are developed on both webs. Primaries and secondaries and their coverts bright chestnut, mottled with brown at the extremity, except the outer secondaries, where the mottling resolves itself into three or four rather wide brown bars. Thighs and middle of belly buff; under tail-coverts buff, barred with black. Tail black, barred with buff. A pair of moderately-developed spurs on the tarsi. Total length 12·3 inches, wing 6·4, tail 2·9, tarsus 1·7.

Adult female. Differs from the male only in the absence of spurs. Total length 11·6 inches, wing 6·3, tail 2·7, tarsus 1·6.

Hab. N.E. Africa: Shoa.

a. ♂ ad. sk.	Shoa (*Harris*).	India Museum [P.]. (Type of the species.)
b–d. ♂ ♀ ad. sk.	Shoa (*Harris*).	India Museum [P.].
e. ♀ ad. st.	Shoa.	India Museum [P.].

15. Francolinus gutturalis.

Perdix gutturalis, *Rüppell, N. Wirbelth.* p. 13 (1835) [Abyssinia].

Francolinus gutturalis, *Des Murs in Lefebvre's Voy. en Abyss.* p. 148 (1845–50); *Rüppell, Orn. N.O.-Afr.* p. 103, pl. 40 (1845); *Gray, Gen. B.* iii. p. 505 (1846); *Heugl. J. f. O.* 1862, p. 412 [Bogos, Somali]; *Brehm, Reis. Habesch*, p. 223 (1863); *Finsch, Trans. Zool. Soc.* vii. p. 293 (1870); *Blanf. Geol. & Zool. Abyss.* p. 425 (1870) [Senafé, Anseba]; *Finsch & Hartl. Vög. Ost-Afr.* p. 584 (1870); *Heugl. Orn. N.O.-Afr.* ii. p. 895 (1873); *Antin. e Salvad. Cat. Ucc.* p. 135 (1873); *üd. Ann. Mus. Civ. Genova*, iv. p. 498 (1873) [Abyssinia]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 372 (1891); *Grant, Ibis*, 1892, p. 43.

Scleroptera gutturalis, *Blyth, J. A. Soc. Beng.* xxiv. p. 304 (1856) [Somali]; *Speke, Ibis*, 1860, p. 248 [Somali].

Chœtopus gutturalis, *Bonap. C. R.* xlii. p. 882 (1856).

Adult male. Upper parts similar to those of *F. spilolæmus*; lores, superciliary stripes, sides of the face, neck, and nape rufous buff, spotted with black; ear-coverts whitish brown; chin and throat white, the feathers at the edges spotted with black. Chest chestnut, each feather with a mottled grey and buff shaft-stripe. Breast and rest of underparts pale buff, each feather with a black stripe down the shaft or with the shaft white and dividing the black on either side nearly to the end of the feather; sides and flanks heavily blotched with chestnut and irregularly barred on the outer web with blackish brown. Thighs and under tail-coverts barred with black. Both the primaries and secondaries are more brown and less chestnut than in *F. spilolæmus*, and the ground-colour of the tail is a trifle less black. A pair of moderate spurs on the tarsi. Total length 12·5 inches, wing 6·5, tail 2·8, tarsus 1·4.

Adult female. Resembles the male, but is not provided with spurs. Total length 11·9 inches, wing 6·3, tail 2·7, tarsus 1·4.

Hab. North-east Africa: Abyssinia, Bogos, Mountains of Somali.

a. ♂ ad. sk.	Anseba Valley, July.	W. T. Blanford, Esq. [C.].
b. ♀ ad. sk.	Tekonda, Tigré, Feb.	W. T. Blanford, Esq. [C.].
c–g. ♂ ♀ ad. sk.	Senafé, Tigré, April, May (*W. Jesse*).	Tweeddale Coll.

16. Francolinus uluensis. (Plate IV.)

Francolinus uluensis, *Grant, Ibis*, 1892, p. 44 [Ulu Country, East Africa]; *Sharpe, Ibis*, 1892, p. 551.

It is somewhat doubtful whether two specimens collected by

Mr. F. J. Jackson, at Machako's, in the Ulu Country, should be included in *F. gutturalis* or not. One would certainly expect to find them distinct from the Abyssinian birds, and on comparing them with typical specimens from Abyssinia the differences, although few, seem to justify my separating them under the above name. Both specimens are males with fully-developed spurs, and they differ from *F. gutturalis* in the following particulars:—On the side of the neck, between the continuations of the rufous-buff superciliary and cheek stripes, and behind the ear-coverts, lies a well-marked triangular patch, an inch or more in length, of white feathers with black tips. There is no trace of this in *F. gutturalis*, but it is equally distinct in *F. africanus* from S. Africa. Again, the feathers of the breast and belly, instead of having black shaft-stripes, are covered with irregular arch-shaped black bars, which give these parts an ocellated appearance much as in *F. africanus*. The tarsus is longer than in *F. gutturalis*, 1·6 as against 1·4. Total length 12 inches, wing 6·5, tail 2·9, tarsus 1·6.

Hab. East Africa: Ulu Country.

a. ♂ ad. sk. Machako's, Ulu Country, Feb. F. J. Jackson, Esq. [P.]. (Type of the species.)

17. Francolinus africanus.

Pearled Partridge, var. A, *Lath. Gen. Syn.* ii. p. 773 (1783).
Perdix afra, *Lath.* (*nec Müll.*) *Ind. Orn.* ii. p. 648 (1790); *Temm. Pig. et Gall.* iii. pp. 337, 723 (1815); *Less. Traité d'Orn.* p. 505 (1831).
Perdix perlata, *Temm. Pig. et Gall.* iii. pp. 326, 721 (1815) [part.].
Francolinus africanus, *Steph. in Shaw's Gen. Zool.* xi. p. 323 (1819); *Gray, Hand-l. B.* ii. p. 265, no. 9660 (1870); *Salvin, Cat. Strickl. Coll.* p. 566 (1882); *Hartert, Kat. Mus. Senckenb.* p. 195 (1891); *Grant, Ibis*, 1892, p. 43.
African Partridge, *Lath. Gen. Hist.* viii. p. 277 (1823).
Francolinus afer, *Gray, List Gall. B.* iii. p. 34 (1844); *id. Gen. B.* iii. p. 505 (1846); *Sclater, P. Z. S.* 1866, p. 23 [British Kaffraria]; *Gray, List Gallinæ Brit. Mus.* p. 50 (1867); *Layard, B. S. Afr.* p. 270 (1867); *Shelley, Ibis*, 1875, p. 84 [Wellington to Ceres, Cape Colony]; *Barratt, Ibis*, 1876, p. 208 [Potchefstroom]; *Sharpe, in Oates's Matabele L.* p. 323 (1881) [Vaal R.]; *Holub & Pelz. Orn. S. Afr.* p. 188 (1882); *Sharpe, in Layard's B. S. Afr.* p. 595 (1884) [Grahamstown, Port Elizabeth]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 81 (1891).
? Pternistes (Scleroptila) afra, *Blyth, Cat. B. Mus. As. Soc.* p. 250 (1849).
Chœtopus afer, *Bonap. C. R.* xlii. p. 882 (1856).

Adult male. Upper parts and tail the same as in *F. spilolæmus*, but only the outer webs of the inner primaries are mixed with chestnut, and the secondaries are brown, barred with rufous buff. Ear-coverts brown; lores, superciliary stripes, and sides of the face and throat rufous buff. Chin and throat white, more or less barred or mottled on the lower parts and sides with black. A large patch of black and white barred feathers is situated on the side of the neck

behind the ear-coverts, and enclosed between the continuations of the superciliary and cheek stripes of rufous. Upper chest rust-coloured, each feather shading into bright buff towards the shaft and tipped with grey; lower chest a mixture of buff and grey, blotched at the extremity with chestnut on one or usually both webs. Breast and belly whitish buff, irregularly barred and arched with black, and conveying the idea of the whole being finely and rather irregularly ocellated. Sides and flanks buff, barred on the outer web with blackish grey and with a large chestnut blotch at the extremity of the inner web; under tail-coverts buff, barred with black. A pair of moderate, rather blunt, spurs on the tarsi. Total length 13 inches, wing 6·4, tail 3, tarsus 1·6.

Adult female. Differs only from the male in having no spurs. Total length 12 inches, wing 6·3, tail 3, tarsus 1·5.

Hab. Eastern South Africa: Transvaal to Cape Colony.

a, b. ♂ ♀ ad. sk.	Transvaal.	J. H. Gurney, Esq., & Dr. R. B. Sharpe [P.].
c. ♂ ad. sk.	Potchefstroom.	F. A. Barratt, Esq. [P.].
d. ♂ ad. sk.	Drakensberg Mts., Natal.	W. H. Cobley, Esq. [P.].
e, f. ♂ ♀ ad. sk.	Cape Colony (*E. A. Butler*).	Shelley Coll.
g. ♂ ad. st.	Cape of Good Hope.	Hardwicke Bequest.
h. ♂ ad. st.	Cape of Good Hope.	J. R. Reeves, Esq. [P.].
i, k. ♂ ♀ ad. sk.	S. Africa.	J. Rocke, Esq. [P.].
l. ♀ ad. sk.	S. Africa.	Mrs. Stirling [P.].
m. ♂ ad. sk.	S. Africa (*Layard*).	Shelley Coll.

18. Francolinus finschi.

Francolinus, sp.?, *Bocage, J. Sci. Lisb.* vi. p. 278 (1878) [Caconda, Benguela].

Francolinus finschi, *Bocage, Orn. Angola*, p. 406 (1881); *Reich. & Schalow, J. f. O.* 1882, p. 116; *Sharpe, in Layard's B. S. Afr.* p. 598 (1884); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 381 (1891); *Grant, Ibis*, 1892, p. 43.

Adult male and female. Upper parts like *F. gutturalis* and *F. spilolæmus*, but differs in being larger and having a stouter bill; the top of the head, back of the neck, and chest dusky grey; the middle of the feathers darker; sides of the forehead, superciliaries, lores, cheeks, sides of the throat, and sides and base of the neck reddish buff and unspotted; chin and throat pure white; the feathers of the upper breast and flanks grey, narrowly barred with buff, of the belly and sides golden buff, all with chestnut spots and margined with pale grey.

Male. Total length 14·5 inches, wing 6·5, tail 3·2, tarsus 1·65.

Hab. South-western Africa: Benguela.

19. Francolinus castaneicollis.

Francolinus castaneicollis, *Salvadori, Ann. Mus. Civ. Genova*, xxvi. p. 542 (1888) [Lago Ciar-Ciar, Shoa]; *Grant, Ibis*, 1890, p. 350, pl. xi.; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 371 (1891); *Grant, Ibis*, 1892, p. 44.

Adult female (type of the species). Top of the head dark, feathers with pale margins and ornamented by subterminal black spots; forehead black, clothed with sharp rigid feathers. Superciliaries and hinder margin of the forehead chestnut, variegated with black; space in front of the eyes pale and cheeks rufous chestnut, with the margins of the feathers black; ear-coverts brown. Nape chestnut, the feathers ornamented with two white spots on the outer web and two black on the inner; feathers of the upper back chestnut in the middle, variegated with black and margined with grey; lower back and rump olive-grey, spotted and marked indistinctly with black bars. Upper tail-coverts the same, but with wider black bars; breast and middle of belly white, spotted with black and chestnut, the side feathers spotted with chestnut and barred with black and white. Under tail-coverts dirty white, barred with black. Wings dusky, the lesser and median coverts with semi-lunar subterminal black spots and pale margins; wing-feathers variegated on the outer web with chestnut, the inner ones with white shaft-stripes marked with black transverse spots and pale bars. Outer tail-feathers rufous, variegated with black; middle pair greyish olive, barred with black, with the tips paler. Bill and feet dusky. Total length 12 inches, wing 6·6, tarsus 1·7.

Hab. Lake Ciar-Ciar, Shoa.

20. Francolinus levaillanti.

Perdix levaillantii, *Valenc. Diet. Sci. Nat.* xxxviii. p. 441 (1825) [Cape].

Perdix vaillantii, *Temm. Pl. Col.* v. pl. 33 [no. 477] (1829).

Perdix levaillantoides, *Smith, Rep. Exp. Cent. Afr.* p. 55 (1836).

Francolinus levaillanti, *Smith, Ill. Zool. S. Afr.* pl. 85 (1843) [Cape Colony]; *Gray, List Gall. B.* iii. p. 33 (1844); *id. Gen. B.* iii. p. 505 (1846); *Gurney, Ibis*, 1864, p. 354, 1865, p. 274 [Natal]; *Gray, List Gallinæ Brit. Mus.* p. 49 (1867); *Layard, B. S. Afr.* p. 270 (1867); *id. Ibis*, 1869, p. 375 [Grootevadersbosch]; *Gray, Hand-l. B.* ii. p. 265, no. 9656 (1870); *Ayres, Ibis*, 1871, p. 261 [Transvaal]; *Butler, Feilden, & Reid, Zool.* (3) vi. p. 338 (1882) [Newcastle, Natal]; *Sharpe, in Layard's B. S. Afr.* p. 596 (1884) [Port Elizabeth, East London, British Kaffraria]; *Grant, Ibis*, 1890, p. 347; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 338 (1891); *Grant, Ibis*, 1892, p. 45.

Pternistes (Scleroptila) levaillanti, *Blyth, Cat. B. Mus. As. Soc.* p. 250 (1849).

Chœtopus levaillanti, *Bonap. C. R.* xlii. p. 882 (1856).

Adult male and female. Top of the head brown, circumscribed by the superciliary stripes of black and white feathers, which, starting just behind the nostril, become confluent on the nape, and run down the middle of the back of the neck, widening at the base of the neck into a somewhat enlarged triangular patch of black and white feathers. A second pair of bands of black and white feathers arising close to the former, just above the angle of the gape, bound the chin and throat and unite at the base of the latter, where they

form a patch of white feathers edged and spotted with black. Rest of the sides of the face and neck rust-colour, as also the outer part of the chin and throat, centre part white. Rest of the upper parts umber-brown, blotched on one or both webs with black, barred with buff, and with buff shaft-stripes. Primaries and secondaries and their coverts light chestnut, mottled with brown at the tips. Chest and breast light chestnut, with buff shaft-stripes, and here and there irregularly barred or spotted with blackish. Belly buff, blotched on one or both webs with chestnut; sides, flanks, thighs, and under tail-coverts buff, barred with brown and blotched here and there with chestnut. Tail brownish black, tipped with light brown and barred narrowly with buff. Tarsi with or without small blunt spurs. Total length 13 inches, wing 6·5, tail 2·6, tarsus 1·5.

Hab. South Africa: Transvaal, Orange Free State, Natal, Cape Colony.

a. ♂ ad. sk.	Transvaal.	J. H. Gurney, Esq. [P.].
b. Ad. sk.	Near Vaal River, Potchefstroom.	F. A. Barratt, Esq. [P.].
c. ♀ ad. sk.	Near Kroonstad, Orange Free State.	F. A. Barratt, Esq. [P.].
d. ♂ imm. sk.	Ingagane R., Natal, July.	Capt. Savile G. Reid [P.].
e–g. ♂ ad. sk.	South Africa.	J. Rocke, Esq. [P.].
h, i. ♀ ad. sk.	South Africa (*Layard*).	Shelley Coll.
j. ♂ ad. sk.	South Africa.	Mrs. Stirling [P.].
k. Ad. sk.	South Africa.	Purchased.
l, m. ♀ ad. et juv. st.	Cape of Good Hope.	Hardwicke Bequest.
n. Skeleton.		

21. Francolinus gariepensis.

Francolinus gariepensis, *Smith, Ill. Zool. S. Afr.* pls. 83 [♂] & 84 [♀] (1849) [Caledon & Vaal Rs.]; *Gray, List Gall. B.* iii. p. 33 (1844); *id. Gen. B.* iii. p. 505 (1846); *id. List Gallinæ Brit. Mus.* p. 50 (1867); *Layard, B. S. Afr.* p. 272 (1867); *Gray, Hand-l. B.* ii. p. 265, no. 9657 (1870); *Finsch & Hartl. Vög. Ost-Afr.* p. 582 (1870) [part.]; *Ayres, Ibis*, 1873, p. 282 [Transvaal]; *Sharpe, in Layard's B. S. Afr.* p. 599 (1884) [part.]; *Ayres, Ibis*, 1886, p. 292 [Potchefstroom, Limpopo R.]; *Grant, Ibis*, 1890, p. 347; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 340 (1891) [part.]; *Grant, Ibis*, 1892, p. 45.

Chœtopus gariepensis, *Bonap. C. R.* xlii. p. 882 (1856).

Adult male and female. Top of the head and nape black, each feather margined with rufous; rest of the upper parts umber-brown or greyish brown, most of the feathers blotched on one or both webs with deep chestnut and black, barred with buff, and with buff shaft-stripes edged externally with black. From behind the nostrils arise a pair of superciliary stripes of mixed black and white feathers, which pass along the sides of the neck, widely apart from one another and never uniting at the back of the head as in *F. levaillanti*. A second pair of white and black bands arise behind the gape, and surround the white chin and throat. Sides of the face rufous buff.

Feathers of the fore part of the neck rust-colour, paler towards the shaft, and with a black subterminal mark on either web. Chest and rest of underparts bright buff. All the feathers (except those of the middle of the belly and vent, which are uniform, and the under tail-coverts, which are barred with black) are heavily blotched on one or both webs with dark chestnut, and dotted or margined with black near the extremity; some of the long flank-feathers are also barred with black on the outer web. The primaries and primary-coverts are chestnut mottled with brown at the extremity; secondaries paler and barred with brown. Tail blackish brown, barred with buff and tipped with pale buff. In most the male examples possess fairly-developed spurs and the females do not; but there are exceptions, such as a female with a moderately-developed spur on the left leg and none on the right, while a male, which is apparently perfectly adult, has the spurs represented by a mere rudimentary pair of knobs on the tarsi. Iris hazel; bill dusky yellow at the base; tarsi and feet dusky yellow. Total length 13·5 inches, wing 6·8, tail 3·1, tarsus 1·6.

Hab. South-eastern Africa west of the Drakensberg Mts.

a, b. ♂ ♀ ad. sk.	Potchefstroom, April, Nov. (*T. Ayres*).	J. H. Gurney, Esq. [P.].
c. ♂ ad. sk.	Transvaal.	A. Foresman, Esq. [P.].
d. ♀ ad. sk.	Transvaal.	Tweeddale Coll.
e, f. ♂ ♀ ad. sk.	Source of the Vaal River.	Sir A. Smith [C.]. (Types of the species.)
g, h. ♂ ♀ ad. sk.	S. Africa.	Earl of Derby [P.].
i, k. ♂ ♀ ad. sk.	S. Africa.	Mrs. Stirling [P.].

22. Francolinus jugularis.

Francolinus gariepensis, *Strickl. & Scl. (nec Smith) in Jard. Contr. Orn.* p. 157 (1852) [Damaraland]; *Monteiro, P. Z. S.* 1865, p. 91 [Benguela]; *Finsch & Hartl. Vög. Ost-Afr.* p. 582 (1870) [part.]; *Bocage, J. f. O.* 1876, p. 305 [Capangombe]; *Bocage, Orn. Angola*, p. 404 (1881); *Sharpe in Layard's B. S. Afr.* p. 599 (1884) [part.].

Scleroptera gariepensis, *Gurney, in Anderss. B. Damaraland*, p. 245 (1872) [Damara- and Gt. Namaqua-lands].

Francolinus jugularis, *Büttikofer, Notes Leyd. Mus.* xi. pp. 76, 77, pl. iv. (1889) [Gambos]; *Grant, Ibis*, 1890, p. 348; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 342 (1891); *Grant, Ibis*, 1892, p. 45.

Adult male and female. Resemble *F. gariepensis*, but the whole of the plumage is somewhat paler; the lower breast and belly are pale buff, with only a few small spots of chestnut and black, except on the sides and flanks. The black stripes surrounding the chin and throat form a patch of black and white feathers on the front of the neck, more marked in some specimens than in others, and in this respect resembling *F. levaillanti*. Total length 12 inches, wing 6·9, tail 3·2, tarsus 1·6.

Hab. Western South Africa: from Gt. Namaqualand northwards to Angola.

a–c. ♂ ♀ ad. sk.	Rehoboth, Gt. Namaqualand, June (*C. J. Andersson*).	Tweeddale Coll. & J. H. Gurney, Esq. [P.].
d, e. ♂ ♀ ad. sk.	Benguela.	J. J. Monteiro, Esq. [C.].
f. ♀ ad. st.	Western South Africa.	Purchased.

23. Francolinus shelleyi. (Plate VI.)

Francolinus gariepensis, *Finsch & Hartl. (nec Smith)*, *Vög. Ost-Afr.* p. 582 (1870) [part.]; ? *Fischer & Reich. J. f. O.* 1880, p. 140 [Zanzibar]; *Böhm, J. f. O.* 1882, p. 195 [Kuin, Kamba, Kakoma Dist.]; *Shelley, Ibis*, 1882, p. 361 [Umfuli R.]; *Butler, Feilden, & Reid, Zool.* (3) vi. p. 338 (1882) [Colenso]; *Sharpe, in Layard's B. S. Afr.* p. 599 (1884) [part., Umfuli R.]; ? *Fischer, J. f. O.* 1885, p. 120.

Francolinus shelleyi, *Grant, Ibis*, 1890, p. 348; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 77 (1891); *Grant, Ibis*, 1892, p. 45.

Adult male. Similar to *F. gariepensis*, but, as in *F. jugularis*, there is a patch of black and white feathers at the base of the throat, the chest is chestnut, the terminal part of the inner web of each feather being pale buff, barred with black, and the tip grey. The breast and belly white with ⩒-shaped black bars; the flanks and sides are chestnut, with whitish-buff shaft-stripes, and sometimes the outer web the same colour and barred with black. Thighs, vent, and under tail-coverts pale buff, barred irregularly with black. Total length 13 inches, wing 5·8, tail 3·4, tarsus 1·5.

Hab. South-eastern Africa: Natal, Swaziland, Umfuli River. ? E. Africa, Zanzibar (*Fischer*).

a. ♂ ad. sk.	Natal (*Gordge*).	Shelley Coll.
b. ♀ ad. sk.	Colenso, Tugela R., Natal, Nov.	Capt. Savile G. Reid [C.].
c. ♂ ad. sk.	Swaziland, July (*T. E. Buckley*).	Shelley Coll.
d. ♂ ad. sk.	Umfuli River, Matabeleland, Sept. (*J. S. Jameson*).	Shelley Coll. (Type of the species.)

24. Francolinus elgonensis. (Plate V.)

Francolinus elgonensis, *Grant, Ibis*, 1891, p. 126 [Mt. Elgon]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 347 (1891); *Grant, Ibis*, 1892, p. 45.

Adult female. Most nearly allied to *F. shelleyi*, from which it differs in having the feathers of the head black, very narrowly margined with rust-colour; the sides of the face and a patch on the side of the neck, behind the ear-coverts and between the black and white stripes, clear buff; the ear-coverts golden brown, with black extremities; the fore part, sides, and back of the neck, between the continuation of the black and white superciliary stripes, rufous chestnut, each feather ornamented with a round terminal black spot; the ground-colour of the rest of the underparts rich black; the chest and breast feathers either chestnut tipped with buff and with a subterminal wavy black bar, or chestnut on the outer web and

buff barred with black on the inner; the belly and rest of the underparts black, tipped and barred with buff mixed with rufous; the primaries and inner secondaries bright chestnut, barred and mottled with black towards the tip; the outer secondaries dark brown, with regular narrow bars of buff and rufous on both webs. Iris brown. Bill dusky horn, lower mandible fading into white horn at base. Legs pale yellowish white. Total length 12 inches, wing 6·9, tail 3·2, tarsus 1·8.

Hab. Central East Africa: Mount Elgon.

a. ♀ ad. sk. Mount Elgon, Feb., 11,000 ft. F. J. Jackson, Esq. [P.]. (Type of the species.)

25. Francolinus gularis.

Wood Partridge, *Lath. Gen. Hist.* viii. p. 299 (1823).

Perdix gularis, *Temm. Pig. et Gall.* iii. pp. 401, 731 (1815); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 198 (1817); *id. Tabl. Encycl. Méth.* i. p. 366 (1823); *Gray, Ill. Ind. Zool.* i. pl. 56. fig. 1 (1830–32); *Blyth, Cat. B. Mus. As. Soc.* p. 251 (1849).

Perdix monogrammica, *Less. Traité d'Orn.* p. 504 (1831).

Francolinus gularis, *Gray, List Gall. B.* iii. p. 34 (1844); *Hodgs. in Gray's Zool. Misc.* p. 85 (1844); *id. Icon. ined. in Brit. Mus.* no. 378 [Nepal]; *Gray, Gen. B.* iii. p. 505 (1846); *id. List Gallinæ Brit. Mus.* p. 55 (1867); *id. Hand-l. B.* ii. p. 266, no. 9685 (1870); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 310 (1891); *Grant, Ibis*, 1892, p. 46.

Ortygornis gularis, *Jerd. B. Ind.* ii. p. 573 (1863); *Hume, Nests & E. Ind. B.* p. 544 (1873); *Ball, Str. F.* vii. p. 234 (1878) [N. valley of Ganges]; *Hume & Marshall, Game B. India*, ii. p. 59, pl. (1879); *Hume, Str. F.* ix. p. 258 (1880) [E. Cachar], xi. p. 305 (1888) [not in Manipur]; *Oates, ed. Hume's Nests & Eggs*, iii. p. 437 (1890).

Adult male and female. Top of the head and nape brown, rest of the upper parts narrowly barred with brown, black, and buff alternately, and with white shafts. Primaries chestnut, shading into brown towards the extremities; primary-coverts brown, dotted on the outer webs with rufous; secondaries brown washed with rufous, and with irregular bars of buff, edged on either side with deep brown on the outer web. Wide superciliary stripe, lores, and cheeks whitish buff; ear-coverts dark brown. Chin, throat, and front of neck deep rust-colour. Feathers of the chest and rest of the underparts white or pale buff, margined on either side by a black and then a brown band. Under tail-coverts pale rufous. Centre pair of tail-feathers brown-chestnut towards the base and finely vermiculated with black; rest of the tail-feathers dark chestnut, tipped with brownish buff. The male is provided with a sharp pair of spurs.

Male. Total length 13 inches, wing 7·2, tail 4·1, tarsus 2·4.

Female. Total length 12·6 inches, wing 6·8, tail 3·4, tarsus 2·1.

Hab. Northern India: Terai region, skirting the southern bases of the Himalayas from Pilibhit to Sadiya in E. Assam, Cachar, and Tipperah.

a. ♂ ad. sk.	[Central India.]	Tweeddale Coll.
b, c. ♂ ad. st.	Himalaya Mountains.	
d–f. ♂ ♀ ad. sk.	Oudh, Dec.	Hume Coll.
g. ♀ ad. sk.	Mogul Serai, Oudh, Nov.	Hume Coll.
h, i. ♂ ♀ ad. sk.	Nepal.	B. H. Hodgson, Esq. [C.].
k–m. ♂ ad. sk.	Purneah.	Capt. S. Pinwill [P.].
n, o. ♀ ad. sk.	Buxa Doars, Jan., Feb. (*L. Mandelli*).	Hume Coll.
p, q. ♂ ♀ ad. sk.	Dacca.	Hume Coll.
r–t. ♂ ♀ ad. sk.	Assam (*J. M'Clelland*).	India Museum [P.].
u. ♂ ad. sk.	Gauhati, March.	Hume Coll.
v. ♂ ad. sk.	Dilkoosha, Cachar, April (*J. Inglis*).	Hume Coll.
w–y. ♂ ♀ ad. sk.	Sylhet, Jan., Aug. (*J. Inglis*).	Hume Coll.

26. Francolinus adspersus. (Plate VII.)

Francolinus adspersus, *Waterh. in Alexander's Exp.* ii. p. 267, pl. (1838); *id. List Gall. B.* iii. p. 34 (1844); *Gray, Gen. B.* iii. p. 505 (1846); *Layard, B. S. Afr.* p. 269 (1867) [Orange R. and Ovampoland); *Gray, List Gallinæ Brit. Mus.* p. 52 (1867); *Layard, Ibis*, 1869, p. 375 [Namaqualand]; *Gray, Hand-l. B.* ii. p. 265, no. 9669 (1870); *Bocage, J. Sci. Lisb.* v. pp. 42, 59 (1874) [Cunene R.]; *id. J. f. O.* 1876, p. 305 [Gambos]; *id. Orn. Angola*, p. 410 (1881); *Sharpe, in Layard's B. S. Afr.* p. 590 (1884); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 353 (1891); *Grant, Ibis*, 1892, p. 46.

Chœtopus adspersus, *Bonap. C. R.* xlii. p. 882 (1856).

Scleroptera adspersa, *Gurney, ed. Anderss. B. Damaral.* p. 247 (1872) [Damara- and Great Namaqua-lands, Lake Ngami].

Adult male and female. Whole of the upper surface and wings (except the mantle) umber-brown, finely mottled with dirty white and black; ear-coverts brown; lores and space in front of the eyes nearly black; rest of the sides of the face, superciliary stripes, chin, and throat white, mottled with black. Mantle, neck, chest, and rest of underparts narrowly barred with black and white. The male is provided with long sharp spurs. Iris brown; bill and legs coral-red. Total length 12·6 inches, wing 6·6, tail 3·5, tarsus 1·7.

Immature birds differ from the adult in having the mantle similarly coloured to the rest of the upper parts, some of the scapulars blotched with black at the extremity, and the underparts brownish white, finely vermiculated with black, many of the feathers of the breast and belly being somewhat widely barred with white, and those of the sides tipped with the same colour.

Hab. Western South Africa, from the Orange River to Cunene River, and extending inland to Lake Ngami.

a. ♂ ad. sk.	Humbe, Cunene River (*Anchieta*).	Shelley Coll.
b. Imm. sk.	Damaraland (*Capt. Alexander*).	Gould Coll. (Type of the species.)
c. Ad. sk.	Damaraland.	Mrs. Stirling [P.].

d. ♀ ad. sk.	Otjimbinque, Damaraland, Sept. (*C. J. Andersson*).	Tweeddale Coll.
e, f. Ad. et imm. sk.	Western S. Africa.	Zoological Soc. Coll.
g. ♂ ad. st.	Western S. Africa.	

27. Francolinus griseostriatus.

Francolinus griseostriatus, *Grant, Ibis*, 1890, p. 349, pl. x. [Quanza R.]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 348 (1891); *Grant, Ibis*, 1892, p. 46.

Adult male. Top of the head greyish brown; lores, cheeks, ear-coverts, superciliary stripes, and sides of throat reddish white, paler in front of and behind the eye. Feathers of the back of the neck, back, scapulars, and outer secondaries dark chestnut down the middle, margined on either side by a black and pearl-grey band; the scapulars and outer secondaries are also irregularly vermiculated and barred with black. Wing-coverts, lower back, rump, and upper tail-coverts umber-brown finely vermiculated with dusky brown and buff. Primaries and secondaries reddish chestnut, darker on the inner webs, vermiculated and irregularly banded on both webs with black. Chin and middle of throat white. Feathers of the front of the neck and upper chest rufous chestnut, widely edged with whitish grey. Breast, belly, thighs, and under tail-coverts with wide dull rufous shaft-stripes, slightly vermiculated on the flanks with black. Tail rufous chestnut, the middle feathers pale buff on the edges of webs, and all transversely vermiculated with black, though on the outer feathers this is confined to the extremity. Under surface of wings silver-grey, vermiculated with very dull rufous buff. A pair of long sharp spurs on the tarsi. Bill dark brown, the tip, basal part, and lower mandible yellow. Legs and feet yellow; spurs dark brown. Total length 12·5 inches, wing 6·3, tail 3·2, tarsus 1·7.

Hab. River Quanza*, W. Africa.

a. ♂ ad. sk.	River Quanza.	Dr. R. B. Sharpe [P.]. (Type of the species.)

28. Francolinus bicalcaratus.

Tetrao bicalcaratus, *Linn. S. N.* i. p. 277 (1766).
Perdrix du Sénégal, *Daubent. Pl. Enl.* ii. pl. 47 (no. 137).
Senegal Partridge, *Lath. Gen. Syn.* ii. p. 757 (1783); *id. Gen. Hist.* viii. p. 267 (1823).
Perdix bicalcarata, *Lath. Ind. Orn.* ii. p. 643 (1790).
Perdix senegalensis, *Bonn. Tabl. Enc. M.* i. p. 212, pl. 93. fig. 2 (1791).
Perdix adansonii, *Temm. Pig. et Gall.* iii. pp. 305, 717 (1815); *Less. Traité d'Orn.* p. 504 (1831).
Francolinus senegalensis, *Steph., Shaw's Gen. Zool.* xi. p. 330 (1819).
Chœtopus adansoni, *Swains. B. West Afr.* ii. p. 217 (1837) [Senegal].
Francolinus bicalcaratus, *Gray, List Gall. B.* iii. p. 33 (1844); *id. Gen.*

* Written by accident "Congo" in the original description.

B. iii. p. 505 (1846); *Hartl. J. f. O.* 1854, p. 209 [Senegal, Gambia R. Niger]; *id. Orn. W.-Afr.* p. 201 (1857); *Gray, List Gallinæ Brit. Mus.* p. 49 (1867); *id. Hand-l. B.* ii. p. 265, no. 9655 (1870); *Sharpe, Ibis*, 1872, p. 73 [Accra]; *Shelley & Buckley, Ibis*, 1872, p. 290 [Accra]; *Ussher, Ibis*, 1874, p. 72 [Gold Coast]; *Reich. J. f. O.* 1874, p. 383 [Gold Coast]; *Forbes, Ibis*, 1883, p. 518 [Egga, R. Niger]; *Shelley, Ibis*, 1883, p. 560 [Shonga, R. Niger]; *Reid, Ibis*, 1885, p. 251 [Mogador; C. Blanco, Morocco]; *Hartert, J. f. O.* 1886, p. 602 [Loko]; *Schacck, Mém. Soc. Zool. Fr.* iv. p. 335 (1891); *Grant, Ibis*, 1892, p. 46.

Didymacis senegalensis, *Reichenb. Handb., Gall.* fig. 1768 (1853).

Francolinus albiscapus, *Reichenb. Handb., Gall.* figs. 1753–54 (1853).

Chœtopus bicalcaratus, *Bonap. C. R.* xlii. p. 882 (1856).

Adult male and female. Top of the head brown, shading into rufous brown or dull rufous on the nape; neck chestnut, with an oval black spot edged with buff on the outer half of the shaft of each feather, but in some specimens the rufous is almost wanting on the back of the neck, and the feathers are almost entirely black margined with white. Upper back, wing-coverts, and scapulars brown vermiculated with black, and with a submarginal white band on either side of the feather; lower back, rump, and upper tail-coverts umber-brown, black along the shafts and vermiculated with the same colour. Primaries dark brown, toothed on the outer web with buff and irregularly barred either longitudinally or transversely on the inner web with rufous buff. Secondaries dark brown, mottled with pale buff on the outer web and barred with rufous buff on both. Lores, upper superciliary stripe, and stripe from the nostril to the eye black; lower superciliary stripe and space in front of the eye white; cheeks and sides and base of the throat white, with black shaft-stripes; ear-coverts shining rufous brown. Chin and rest of the throat pure white. Each feather of the chest and rest of the underparts is pale buff, flanked for the basal two-thirds with chestnut and with a wide raquet-shaped black shaft-stripe, within which, along the shaft itself, is a clear line of buff succeeded by a detached subterminal V-shaped spot of the same colour; flanks and under tail-coverts buff, with wide black shaft-stripes. Tail black, barred and clouded with rufous buff. The male has two pairs of spurs, the second (upper) pair being much shorter and less pointed. Total length 12·5 inches, wing 6·8, tail 2·5, tarsus 2·1.

Hab. West Africa, from the Niger to the Mogador coast and C. Blanco, Morocco.

a. ♂ ad. sk.	C. Blanco, Morocco (*Olcese*).	Capt. S. G. Reid [C.].
b. ♂ ad. sk.	Senegal (*d'Einville*).	Riocour Coll.
c, d. ♂ ♀ ad. sk.	Gambia (*Sir A. Moloney*).	Shelley Coll.
e–h. ♂ ♀ ad. et imm. sk.	Accra, Feb., April (*T. E. Buckley, G. E. S., Gov. Ussher*).	Shelley Coll.
i. ♂ ad. sk.	Shonga.	W. A. Forbes, Esq. [P.].
k–m. ♂ ♀ ad. et juv. sk.	West Africa.	Purchased.
n, o. ♂ ♀ ad. st.	West Africa.	
p. Skeleton.		

29. Francolinus clappertoni.

Francolinus clappertoni, *Children, Denh., & Clapperton's Trav.* App. xxi. p. 198 (1826) [Bornu]; *Gray, List Gall. B.* iii. p. 33 (1844); *id. Gen. B.* iii. p. 505, pl. 130 (1846); *Strickl. P. Z. S.* 1850, p. 219; *Gray, List Gallinæ Brit. Mus.* p. 51 (1867); *id. Hand-l. B.* ii. p. 265, no. 9663 (1870); *Heugl. Orn. N.O.-Afr.* ii. p. 886 (1873); *Salvin, Cat. Strickl. Coll.* p. 566 (1882); *Grant, Ibis,* 1891, p. 125; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 375 (1891); *Grant, Ibis,* 1892, p. 47.

Perdix clappertoni, *Cretzschm. Rüpp. Atl.* p. 13, pl. 9 (1826) [Kordofan]; *Rüppell, N. Wirbelth.* p. 11 (1835).

Francolinus rüppelli, *Gray, List Gall. B.* iii. p. 33 (1844) [part.]; *Rüppell, Vög. N.O.-Afr.* p. 106 (1845); *Gray, Gen. B.* iii. p. 505 (1846); *Antin. Cat. Desc. Ucc.* p. 94 (1864); *Gray, List Gallinæ Brit. Mus.* p. 51 (1867) [part.]; *id. Hand-l. B.* ii. p. 265, no. 9664 (1870) [part.]; *Hartert, Kat. Mus. Senckenb.* p. 194 (1891).

Chœtopus clappertoni, *Bonap. C. R.* xlii. p. 882 (1856).

Adult male and female. Top of the head reddish brown; forehead and a patch between the angle of the gape and the cheek black; ear-coverts pale brown. Superciliary stripes, cheeks, sides of the throat, and back of the neck white with black shaft-stripes. Mantle rufous brown, each feather widely margined with whitish buff; back, scapulars, and wing-coverts like the mantle, but the pale buff edges are very irregular and most of the feathers are also longitudinally or transversely barred with buff. Lower back, rump, and upper tail-coverts umber-brown, darker along the shafts. Primaries buff, darker towards the base of the inner web, brown along the shaft, and mottled with the same colour at the extremity; the basal part of the outer web of the outer primaries (where the web widens) and the whole of the outer web of the inner primaries is barred with dark brown: this gives the basal part of the wing, when closed, a marked barred appearance peculiar to *F. clappertoni* and the allied species. Secondaries reddish brown, barred transversely on the outer webs with buff, edged externally with dark brown, and on the inner webs obliquely and irregularly with rufous. Chin, throat, and front of neck white. Chest and rest of the underparts creamy buff, with wide blackish-brown club-shaped shaft-stripes to each feather; some of the flank-feathers are also blotched with deep chestnut. Tail brown, with irregular wavy bars of buff edged externally with darker brown. The male is armed with two pairs of spurs, the upper pair being shorter and blunter. Both mandibles blackish brown, yellowish at the base. Naked skin round eye, legs and feet red. Total length 14 inches, wing 7·4, tail 3·1, tarsus 2·3.

Hab. Central Africa: Kordofan, Darfur, Bornu.

a. ♂ ad. sk.	Central Africa.	Capt. Clapperton [P.].	(Type of the species.)
b. ♀ ad. sk.	Kordofan.	Petherick Coll.	

30. Francolinus gedgii.

? Francolinus rüppelli, *Hartl. Abh. nat. Ver. Brem.* vii. p. 118 (1881) [Lado] *.

Francolinus gedgii, *Grant, Ibis*, 1891, p. 124 [Elgon Plains]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 867 (1891); *Grant, Ibis*, 1892, p. 47; *Sharpe, Ibis*, 1892, p. 551, pl. xiv.

Adult male. Differs from *F. clappertoni* in having the top of the head and the ground-colour of the rest of the upper parts very dark brown; the white margins to the feathers of the upper parts narrower and confined to the sides of the feathers; none of the wing-coverts and only a few of the scapulars with traces of buff bars; and the tarsi, though the bird is a perfectly adult male, with only one pair of blunt spurs. This last character is, however, of little importance. Bill dark brown, yellowish at the base; iris dark brown; legs brown in front, reddish brown behind. Total length 12 inches, wing 7·5, tail 2·8, tarsus 2·4.

Hab. Central East Africa: Elgon Plains.

a. ♂ ad. sk. Elgon Plains, Feb. — Gedge, Esq. [P.].

31. Francolinus hartlaubi.

Francolinus sp.?, *Bocage, J. Sci. Lisb.* i. p. 337 (1869).

Francolinus hartlaubi, *Bocage, J. Sci. Lisb.* ii. p. 350 (1869); *id. J. f. O.* 1876, p. 305; *id. Orn. Angola*, p. 408 (1881) [Capangombo, Huilla, Mossamedes]; *Sharpe, in Layard's B. S. Afr.* p. 602 (1884); *Grant, Ibis*, 1891, pp. 125, 126; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 380 (1891); *Grant, Ibis*, 1892, p. 47.

Immature male. Above ashy brown, spotted and dotted with fulvous and black; these spots are less conspicuous on the rump. Top of the head dark brown, with a little space on the forehead black, behind which there is a narrow white band, which is prolonged on either side of the head in a white superciliary streak. Ear-coverts reddish brown; sides of the head, neck, and underparts strongly striped with brownish black on a white ground, slightly washed with yellow on the lower parts of the abdomen and flanks. Under tail-coverts white, widely barred with blackish. Quills pale brown, dotted with buff on the outer webs and on the edges of the inner. Tail-feathers blackish, barred and edged with white. Bill very strong, black, with the edges and tip yellowish; feet pale pinkish yellow.

This species appears to be closely allied to *F. clappertoni*.

Hab. Western South Africa: Mossamedes.

32. Francolinus icterorhynchus.

Francolinus icterorhynchus, *Heugl. J. f. O.* 1863, p. 275, 1864, p. 27 [Bongo]; *id. Peterm. Geogr. Mitth.* 1869, p. 415; *id. Orn. N.O.-Afr.* ii. p. 894, pl. 29. fig. 1 (1873) [Djur, Kosanga]; *Hartl. Abh.*

* I have little doubt that the specimen obtained by Emin Pasha at Lado is the same as the bird from Elgon. It might be *F. icterorhynchus* as far as locality is concerned; but specimens of this species were also included in the collection described by Hartlaub; it is incredible that it should be the Abyssinian species.

nat. Ver. Brem. vii. p. 118 (1881) [Mahagi, Albert Nyanza]; *Shelley, P. Z. S.* 1888, p. 48 [Tingasi]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 378 (1891); *Grant, Ibis,* 1892, p. 47.

Adult male and female. Lores and front of the head black, shading into dark brown on the top. Feathers of the sides of the throat, neck, and mantle black, margined with buff. Back, scapulars, rump, and upper tail-coverts brown, finely vermiculated with black and buff, the shafts are reddish brown, and most of the feathers have a wide black shaft-patch becoming pointed at the extremity, this is most marked on the scapulars, which, with the wing-coverts and some of the feathers of the back, are irregularly barred and marked with buff. Primaries and secondaries dark brown, the former toothed on the outer web with buff and irregularly barred with rufous buff on the inner *; both webs of the secondaries irregularly barred with rufous buff, and the outer speckled along the margin with the same colour. An indistinct white superciliary stripe, and a band from the nostril to below the eye of the same colour. Space in front of the eye and cheek black; ear-coverts brown; chin and middle of throat white. Chest black, margined with buff and often with a lanceolate buff patch within the black; breast and belly the same, but the terminal portion of the black is circumscribed by the buff, and forms an irregular oval or round spot. Sides and flanks black, irregularly barred with pale buff. Tail blackish brown, with narrow irregular wavy bars of rufous buff. The male is provided with two pairs of spurs, the upper pair being blunter and shorter; the female has one or two pairs of blunt knobs. Iris brown; bill yellowish orange, culmen dusky; orbit and spot behind the eye yellow; feet orange-yellow. Total length 13·5 inches, wing 6·8, tail 3·2, tarsus 2·2.

The *younger male*, with only one pair of blunt spurs developed, has the upper parts and wing-coverts more spotted and barred with buff than the older males.

Hab. Central Africa: Bongo, Djur, Kosanga, and west of Albert Nyanza.

a–c. ♂ ♀ ad. sk.	Tingasi, Equatorial Africa, Aug., Sept.	Emin Pasha [P.].
d, e. ♂ ♀ ad. sk.	Langomeri, Equatorial Africa, July (*Emin Pasha*).	Shelley Coll.

33. Francolinus sharpii.

Francolinus rueppelli, *Gray* (founded on the figure of *Perdix clappertoni,* Cretzschm.), *List Gall. B.* iii. p. 33 (1844) [part.]; *id. List Gallinæ Brit. Mus.* p. 51 (1867) [part.]; *Finsch, Trans. Zool. Soc.* vii. p. 292 (1870) [Senafé, Kokai, Anseba Valley]; *Gray, Hand-l. B.* ii. p. 265, no. 9664 (1870) [part.]; *Blanf. Geol. & Zool. Abyss.* p. 425 (1870) [Antalo, Lebka & Anseba Valleys]; *Heugl. Orn. N.O.-Afr.* ii. p. 888 (1873); *Grant, Ibis,* 1891, pp. 125, 126; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 377 (1891).

Francolinus clappertonii. *Des Murs* (*nec Childr.*), *in Lefebvre's Voy.*

* The bars on the basal part of the outer webs of the outer primaries are less regular and marked than in *F. clappertoni* and the other allied species.

en Abyss. p. 146, pl. xii. (1845–50); *Antin. e Salvad. Cat. Ucc.* p. 134 (1873) [Keren, Bogosland]; *Salvad. Ann. Mus. Civ. Genov.* xxi. p. 211 (1884) [Daimbi, Shoa], xxvi. p. 308 (1888) [Farrè, Shoa].

Chœtopus rüppelli, *Bonap. C. R.* xlii. p. 882 (1856).

Francolinus sharpii, *Grant, Ibis*, 1892, p. 47.

Adult male and female. Upper parts and wings as in *F. clappertoni*, but the general colour is browner, the back, scapulars, and wing-coverts are regularly edged with whitish buff like the mantle, and only the longest scapulars have irregular buff bars; the inner webs of the primaries are dark brown, barred either longitudinally or transversely with rufous, and only buff along the margins. The great difference between the present species and *F. clappertoni* and *F. gedgii* is that the feathers of the chest and breast are umber-brown, shading into black at the extremities, and narrowly margined all round with white. The rest of the plumage of the underparts is the same as in the above-mentioned species. The male is provided with two pairs of spurs, the upper pair being often almost as long and strong as the lower pair. Naked skin round the eye red. Total length 13·5 inches, wing 7·3, tail 3·3, tarsus 2·3.

Hab. Abyssinia, Bogosland, Shoa.

a. ♀ ad. sk.	Kokai, Lebka River, July (*W. Jesse*).	Tweeddale Coll.
b, c. ♂ ♀ ad. sk.	Anseba Valley, July.	W. T. Blanford, Esq. [C.].
d–g. ♂ ♀ ad. sk.	Waliko, Bogosland, July, Aug. (*W. Jesse*).	Tweeddale, Salvin-Godman, & Shelley Colls.
h. ♀ ad. sk.	Senafé, Tigré, Abyssinia, May (*W. Jesse*).	Shelley Coll.
i, k. ♂ ♀ ad. st.	Abyssinia.	Purchased.
l, m. ♂ ♀ ad. sk.	Shoa (*Harris*).	India Museum [P.].
n. Skeleton.		

34. Francolinus capensis.

Cape Partridge, *Lath. Gen. Syn.* ii. pt. ii. p. 756 (1783); *id. Gen. Hist.* viii. p. 265 (1823) [Cape Colony].

Tetrao capensis, *Gmel. Syst. Nat.* i. pt. ii. p. 759 (1788); *Forst. Desc. Anim.* p. 400 (1844), & *Icon. ined.* t. 135.

Perdix capensis, *Lath. Ind. Orn.* ii. p. 643 (1790); *Bonn. Tabl. Encycl. Méth.* i. p. 212 (1791); *Burch. Trav. S. Afr.* i. p. 270 (1824) [Karree R.].

Perdix clamator, *Temm. Pig. et Gall.* iii. pp. 298, 717 (1815); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 235 (1817); *id. Tabl. Encycl. Méth.* i. p. 368 (1823).

Perdix nudicollis, *Temm. Pig. et Gall.* iii. pp. 317, 720 (1815) [part.].

Francolinus capensis, *Steph. in Shaw's Gen. Zool.* xi. p. 333 (1819) [part.]; *Gray, List Gall. B.* iii. p. 34 (1844); *id. Gen. B.* iii. p. 505 (1846); *id. List Gallinæ Brit. Mus.* p. 52 (1867); *id. Hand-l. B.* ii. p. 266, no. 9678 (1870); *Shelley, Ibis*, 1875, pp. 62, 85 [Cape Colony]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 343 (1891); *Grant, Ibis*, 1892, p. 48.

Francolinus clamata, *Steph. in Shaw's Gen. Zool.* xi. p. 327 (1819).

Perdix (Francolinus) clamosus, *Less. Traité d'Orn.* p. 504, pl. 87. fig. 2 (1831).
Pternistes (Clamator) capensis, *Blyth, Cat. B. Mus. As. Soc.* p. 250 (1849).
Chœtopus capensis, *Bonap. C. R.* xlii. p. 882 (1856).
Francolinus clamator, *Layard, B. S. Afr.* p. 268 (1867); *Sharpe, in Layard's B. S. Afr.* p. 591 (1884).

Adult male and female. Top of the head brown, with dots of buff round the margins of the feathers. Neck black, margined with white. Rest of the upper parts, also the thighs and flank-feathers, black, with two, three, or more narrow white lines equidistant from one another and parallel with the margin of the feather, giving the upper surface a general scaly appearance. Primaries and secondaries dark brown, the former vermiculated with buff on the outer web and towards the extremity of the inner, the latter irregularly barred on the outer and also slightly towards the extremity of the inner web with buff. Feathers on the sides of the face dark brown faintly edged with white, those of the chin and throat blackish widely edged with white. Chest black, with irregular white shaft-stripes, and thickly vermiculated with white; rest of the underparts the same, but with wide well-defined white shaft-stripes and fewer vermiculations. Tail black, with irregular bars of rufous buff. The male is provided with one or two pairs of rather blunt spurs; in the female they appear to be absent. Bill dark brown, yellowish at the base; legs orange-red.

Male. Total length 16 inches, wing 8·8, tail 4·4, tarsus 2·7.

Female. Total length 15 inches, wing 8, tail 3·9, tarsus 2·1.

Young birds resemble the adults in the general plumage, but the feathers of the upper parts have white shaft-stripes, the throat is white, and the rest of the underparts are brownish irregularly barred with white.

Hab. South Africa: Cape Colony, extending to the Orange River; Robben Island.

a, b. ♂ ♀ ad. sk.	S. Africa.	Mrs. Stirling [P.].
c, d. ♂ ♀ ad. sk.	S. Africa (*T. C. Atmore*).	Shelley Coll.
e. ♀ ad. st.	S. Africa.	
f. Pull. sk.	Cape of Good Hope.	Sir A. Smith [P.].
g. Pull. sk.	Cape of Good Hope.	Purchased.
h. ♂ ad. st.	Cape of Good Hope.	Hardwicke Bequest.
i. Pull. sk.		Zoological Society Coll.

35. Francolinus natalensis.

Francolinus natalensis, *Smith, S. Afr. Journ.* (2) p. 48 (1833); *id. Ill. Zool. S. Afr.* pl. 13 (1838) [East and West of Port Natal]; *Gray, List Gall. B.* iii. p. 34 (1844); *id. Gen. B.* iii. p. 505 (1846); *Gurney, Ibis*, 1860, p. 214 [Natal]; *Gray, List Gallinæ Brit. Mus.* p. 53 (1867); *Layard, B. S. Afr.* p. 273 (1867); *Gurney, Ibis*, 1868, p. 467 [Transvaal]; *Layard, Ibis*, 1869, p. 375 [Mahura's Country]; *Gray, Hand-l. B.* ii. p. 266, no. 9679 (1870); *Buckley, Ibis*. 1874, p. 387 [Transvaal to Matabele]; *Barratt, Ibis*, 1876, p. 209 [Rustenburg]; *Ayres, Ibis*, 1880, p. 110 [round Rustenburg];

Sharpe, in Oates' Matabele L. p. 323 (1881) [Makalapsi R.]; *Sharpe's ed. Layard's B. S. Afr.* p. 592 (1884); *Ayres, Ibis*, 1886, p. 292 [Limpopo R.]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 345 (1891); *Grant, Ibis*, 1892, p. 49.
Perdix lechoho, *Smith, Rep. Exp. Centr. Afr.* p. 54 (1836).
Chœtopus natalensis, *Bonap. C. R.* xlii. p. 882 (1856).

Adult male and female. Feathers of the lores and forehead a mixture of black and whitish buff; rest of the upper parts like those of *F. icterorhynchus*, but only the feathers of the neck are black irregularly margined with white, and none of the rump-feathers have black shaft-stripes. The ear-coverts are pale brown, the rest of the sides of the face, chin, and throat white, each feather with a subterminal round black spot. Chest, breast, and belly vary greatly in the arrangement of the markings in different individuals. In some specimens the ground-colour is pale buff, with a black shaft-stripe on the basal two-thirds of each feather, and outside it a black band parallel to the margin, in others the feathers are tolerably evenly barred with V-shaped black bars, and between these two extremes every intermediate arrangement can be found. These differences have apparently nothing to do with age or sex. The flanks, thighs, and under tail-coverts buff, barred with brownish black. Primaries and secondaries brown, the former speckled with buff on the outer web, and sometimes also slightly on the inner, the latter irregularly barred and vermiculated with buff on both webs. Tail dark brown, with irregular wavy bars of buff and black. The male is provided with one or two pairs of spurs, when the second pair are present they are small and blunt. One female specimen has a blunt spur developed on the left tarsus, the others have none. Iris dark hazel; bill and legs coral-red.

Male. Total length 13·5 inches, wing 7·2, tail 3·8, tarsus 1·9.

Female. Total length 12 inches, wing 6·3, tail 3, tarsus 1·8.

Immature birds have the black patches on the feathers of the upper parts much more strongly developed than the adults, and narrow white shaft-streaks to the feathers of the mantle, chest, and scapulars; the breast and belly are widely barred and mottled with brownish black.

Hab. Eastern South Africa: Matabeleland, Transvaal, Swaziland, Natal.

a. ♀ imm. sk.	Shoshong, Makalapsi River, Aug.	W.E. & C.G. Oates, Esqrs. [P.].
b, c. ♂ ♀ ad. sk.	Transvaal, July (*T. E. Buckley*).	Shelley Coll.
d, e. ♀ ad. sk.	Rustenburg, June.	F. A. Barratt and J. H. Gurney, Esqrs. [P.].
f. ♀ ad. sk.	Swaziland, July (*T. E. Buckley*).	Shelley Coll.
g–i. ♂ ad. et imm. sk.	Natal.	Sir A. Smith [P.]. (Types of the species.
k. ♀ ad. sk.	Durban (*Gordge*).	Shelley Coll.
l. ♀ ad. sk.	S. Africa.	Mrs. Stirling [P.].
m, n. Pull. sk.	S. Africa.	Verreaux Coll.

36. Francolinus hildebrandti.

Francolinus (Scleroptera) hildebrandti, *Cabanis, J. f. O.* 1878, pp. 206, 243, pl. iv. fig. 2 [Teita Dist.].

Francolinus hildebrandti, *Fisch. Zeit. ges. Orn.* i. p. 382 (1884) [Nivasha L.: Chaga Dist.]; *id. J. f. O.* 1885, p. 120; *Grant, Ann. & Mag. N. H.* (6) iv. p. 145 (1889) [Masai: Kilimanjaro]; *Hunter, in Willoughby's East Africa and its Big Game*, App. i. p. 292 (1889); *Matschie, J. f. O.* 1889, p. 340; *Reich. J. f. O.* 1890, p. 77; *Grant, Ann. Mag. N. H.* (6) vii. p. 144 (1891); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 364 (1891); *Grant, Ibis*, 1892, p. 49; *Sharpe, Ibis*, 1892, p. 552 [Lake Nivasha].

Francolinus altumi, *Fischer & Reich. J. f. O.* 1884, p. 179, pl. ii. [Mt. Meru; Mauri, Pangani R.]; *Fischer, J. f. O.* 1885, p. 120 [Lake Nivasha]; *Fischer, Zeit. ges. Orn.* i. p. 386 (1884) [Pangani R. & Chaga Dist.]; *Shelley, P. Z. S.* 1885, p. 230 [Kilimanjaro]; *Reich. J. f. O.* 1887, p. 51 [Ussandawi]; *Shelley, P. Z. S.* 1889, p. 370 [Useri R.]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 365 (1891).

Adult male. Plumage of the upper parts similar to *F. natalensis*, but none of the feathers of the back and scapulars have black shaft-streaks. Primaries and secondaries dark brown, vermiculated with rufous on the outer web. Ear-coverts dark brown. Feathers of lores, superciliary stripe and sides of the face, throat and neck black, edged with white; those of the chin and middle of the throat white, with an oval or round subterminal black spot. Feathers of the chest, breast, and belly white, with an irregularly shaped black spot covering most of the basal half, and a large heart-shaped black spot at the extremity. Thighs and under tail-coverts buff, barred with rufous. Tail, like the rest of the upper parts, reddish brown, with wavy vermiculations of black. Two pairs of spurs, the upper pair blunt. Iris brown; upper mandible black, lower mandible and legs coral-red; feet dusky. Total length 13·5 inches, wing 7·5, tail 3·8, tarsus 2·2.

In *younger male* specimens the heart-shaped spots on the chest and rest of underparts are browner, and many of those on the breast are mottled with rufous buff.

In a *still younger specimen* the underparts generally resemble those of the female, but are paler, and most of the feathers of the chest, breast, and flanks are mottled with black, and here and there margined with buff, like those of the adult male. The base of the throat and front of the neck resemble the adults, but the ground-colour of the feathers is pale rufous buff instead of white. The chin and rest of the throat are pale rufous buff.

Adult female. Has the upper surface similar to that of the male, but differs in having the underparts a dull orange-brick colour; most of the feathers of the breast ornamented with pale buff spots at the extremities. The chin, throat, and sides of the face pale rufous buff. Irides brown; upper mandible dusky horn; lower mandible and legs coral-red. Total length 12·5 inches, wing 6·9, tail 3·7, tarsus 1·9.

Hab. East Africa: Pangani River to the Kikuyu Country and Lake Nivasha.

a. ♂ ad. sk.	Kilimanjaro, 6000 ft.	H. H. Johnston, Esq. [C.].
b-i. ♂ ♀ ad. sk.	Kilimanjaro, June, Aug.	H. C. V. Hunter, Esq. [P.].
k. ♂ ad. sk.	Useri River, July.	H. C. V. Hunter, Esq. [P.].

37. Francolinus fischeri.

Francolinus fischeri, *Reich. J. f. O.* 1887, p. 51 [Ussere, Wembaere Steppes]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 353 (1891); *Grant, Ibis*, 1892, p. 49.

Adult female. Top of the head greyish brown; eye-stripe, cheeks, and chin white, upper cheek dotted with black; bridle-stripe and broad temple-stripe grey-brown; upper neck and the rest of the underparts clear ochre, isolated feathers with white borders, and some of the breast-feathers have their tips spotted with black. Feathers of the back and sides of the neck blackish brown, with broad white (some with rust-red) shaft-stripes and partial grey margins. Feathers of the upper back grey, with black markings and rust-red shaft-stripes. Wing and rest of the upper surface faded brown, with a rust-coloured streak strongly developed. Flight-feathers with a clean spot at the extremity; tail-feathers and outer webs of the wings clean rust-red, with irregular cross-bars of dark brown. Iris brown; upper mandible and point of lower brownish, rest of lower mandible paler.

This species is near *F. hildebrandti*, Cab., but is distinguished by the clearer under surface, white chin, grey tone of the neck, and pale brown ground of the upper surface. Total length 12·8 inches, wing 6·4, tail 4, tarsus 2.

Hab. Ussere, Wembaere Steppes.

38. Francolinus squamatus.

Francolinus squamatus, *Cassin, P. Ac. Philad.* viii. p. 321 (1857) [Cape Lopez]; *Gray, List Gallinæ Brit. Mus.* p. 51 (1867): *id. Hand-l. B.* ii. p. 265, no. 9666 (1870); *Sharpe & Bouvier, Bull. Soc. Zool. Fr.* i. p. 52 (1876) [Landana & Chinchonxo]; *Bocage, Orn. Angola*, p. 409 (1881) [Landana, Loango Coast]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 383 (1891); *Grant, Ibis*, 1892, p. 50.

Francolinus ashantensis, *Reich. J. f. O.* 1877, p. 13 [Loango Coast] *.

Francolinus petiti, *Bocage, J. Sc. Lisb.* vii. p. 68 (1879); *Reich. & Schalow, J. f. O.* 1879, p. 423 [Landana].

Francolinus (Scleroptera) modestus, *Cab. J. f. O.* 1889, p. 89 [Chinchonxo, Loango Coast].

Francolinus modestus, *Reich. J. f. O.* 1890, p. 109 [Barombi Station, Gaboon].

Adult male and female. Top of the head brown; feathers of the back of the neck and mantle reddish brown, shading into black towards the extremity, and edged with white; rest of the upper

* A young example doubtfully referred to *F. ashantensis* most probably belongs to this species.

parts brown, finely vermiculated with black, most of the feathers darker in the middle and paler towards the margins. In some specimens the scapulars are blotched with black towards the extremity and irregularly barred with rufous buff. Primaries and secondaries brown, the outer half of the outer web of the latter mottled with rufous buff. Ear-coverts brownish white; sides of the face brown, white in front of the eye. Chin and throat white. Sides and front of the neck like the back but paler. Chest and rest of underparts brownish buff, with dark shafts only; sides and flanks with the whole of the middle of the feathers brown, and only the sides buff, vermiculated with dark brown. Under tail-coverts dark brown, with or without buff margins. Tail blackish brown, irregularly barred and mottled with rufous buff. Iris dark reddish brown. Bill and feet orange. The male is provided with one or two pairs of spurs, the lower pair long and sharp, and the upper, when present, short; the female has none.

Male. Total length 13·5 inches, wing 7·3, tail 3·5, tarsus 2·1.

Female. Total length 12·5 inches, wing 6·6, tail 3, tarsus 1·9.

Hab. West Africa: Loango coast and Gaboon.

a, *b*. ♂ ad. sk. et st.	Cape Lopez, W. Africa.	M. du Chaillu [C.].
c. ♂ ad. sk.	Chinchonxo, Loango.	Shelley Coll.
d–*h*. ♂ ♀ ad. et imm. sk.	Landana, Dec. (*Dr. A. Lucan*).	Shelley and Petit Colls.

39. Francolinus schuetti.

Francolinus (Scleroptera) schuetti, *Cab. J. f. O.* 1880, p. 351, 1881, pl. ii. [Lunda, Angola]; *Reich. & Schalow, J. f. O.* 1882, p. 116.
Francolinus schuetti, *Fischer, Zeit. ges. Orn.* i. p. 382 (1884) [Chaga Dist.]; *Shelley, P. Z. S.* 1885, p. 230 [Kilimanjaro]; *Fischer, J. f. O.* 1885, p. 120 [Maurui, Pangani R., & Lake Nivasha]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 382 (1891); *Grant, Ibis*, 1892, p. 50.
Francolinus altumi, *Shelley, P. Z. S.* 1889, p. 370 [part.].

Adult male. Upper surface resembles that of *F. squamatus*, to which species it is very closely allied, but differs in having the feathers of the neck and mantle more widely margined, and with grey instead of white; none of the scapulars barred with buff; the chest and rest of the underparts like the mantle, but the brown of the middle part is not so dark and merges gradually into the grey margins. Iris brown; bill and legs coral-red. Total length 13 inches, wing 6·9, tail 3·4, tarsus 2·1.

Adult female. Differs from the male in having the margins of the feathers on the middle of the breast and belly pale buff instead of dull grey. Total length 12·5 inches, wing 6·6, tail 3·2, tarsus 1·9.

Hab. West Africa: Lunda, Angola. East Africa: Lake Nivasha, Kilimanjaro Dist., 5000 to 6000 feet, Chaga Dist., and Pangani R.

a. ♂ ad. sk.	Kilimanjaro, 6000 ft.	H. H. Johnston, Esq. [C.].
b–*g*. ♂ ♀ ad. sk.	Kilimanjaro, 5000 ft., June, Aug.	H. C. V. Hunter, Esq. [P.].

40. Francolinus ahantensis.

Francolinus ahantensis, *Temm. Bijdr. tot de Dierk.* i. p. 49, pl. 14 (1854) [Ahanta, Gold Coast]; *Hartl. Orn. W.-Afr.* p. 202 (1857); *Büttikofer, Notes Leyd. Mus.* vii. p. 231 (1885) [Liberia & Gold Coast], xi. p. 126 (1889); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 384 (1891); *Grant, Ibis*, 1892, p. 51.

Francolinus ashantensis, *Gray, List Gallinæ Brit. Mus.* p. 51 (1867); *id. Hand-l. B.* ii. p. 265, no. 9665 (1870).

Adult male and female. Upper parts closely resemble those of *F. squamatus*, but the feathers of the back of the neck are blacker and more distinctly edged with white on the sides only. An ill-defined whitish superciliary stripe; lores brownish buff; rest of the sides of the face and ear-coverts brown. Chin and throat white; front and sides of the neck blackish brown, edged with white on the sides. Chest pale brownish, each feather margined on either web by a white band, edged on each side with blackish brown; feathers of the breast and rest of underparts the same, but with the middle part of the feather darker towards the extremity. Under tail-coverts brown, vermiculated with black and edged with buff at the extremity. Iris brown; culmen black, lower mandible coral-red; legs and feet pale coral-red.

Male. Total length 14 inches, wing 7·3, tail 3·4, tarsus 2.

Female. Total length 13 inches, wing 6·7, tail 3·2, tarsus 1·8.

Hab. West Africa: Gold Coast, Liberia.

a. ♀ ad. sk.	Gold Coast (*Aubin*).	Shelley Coll.
b. ♀ ad. sk.	Alisada, Fantee, Nov. (*Gov. Ussher*).	Shelley Coll.
c. ♂ ad. sk.	Zaconde, W. Africa.	Purchased.
d. ♀ ad. sk.	West Africa.	

41. Francolinus jacksoni.

Francolinus jacksoni, *Grant, Ibis*, 1891, p. 123 [Mianzini, Masailand] *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 363 (1891); *Grant, Ibis*, 1892, p. 51, pl. i.; *Sharpe, Ibis*, 1892, p. 552.

Adult male. Forehead, lores, and fore part of cheeks dull red. Chin and upper part of throat white, with narrow rufous shaft-streaks. Superciliary stripes, hinder part of cheeks, and lower part of neck the same, but with wider rufous shaft-streaks. Top of the head and nape reddish brown, with narrow black and grey vermiculated margins. Ear-coverts light brown. Neck, chest, breast, and belly bright chestnut, each feather margined on both sides with white, speckled in some with black. Feathers of the upper back with darker chestnut centres, and black and grey vermiculated margins, the chestnut gradually disappearing towards the lower back and on the shoulders, where the whole feathers are finely vermiculated with black and grey, and only brownish red towards the middle. Lower back, wings, and rump brown, inclining to sienna on the outer wing-coverts, upper tail-coverts, and tail. Feathers of the sides, flanks, lower belly, and under tail-coverts

with dark chestnut centres, widely margined with black and grey vermiculations. A pair of strong spurs, supplemented by a second blunt knob on the left tarsus. Irides brown; eyelids coral-red: bill dark coral-red. Front of legs coral-red, hinder part dusky. Total length 15·5 inches, wing 9·1, tail 5·2, tarsus 2·8.

Hab. East Africa: Mianzini, Masailand.

a. ♂ ad. sk. Mianzini, Masailand, Aug. F. J. Jackson, Esq. [P.]. (Type of the species.)

42. Francolinus erckeli.

Perdix erckelii, *Rüppell, N. Wirbelth.* p. 12 (1835) [Taranta, N.E. Abyssinia].

Francolinus erckelii, *Des Murs, in Lefebvre's Voy. en Abyss.* p. 144, pl. 11 (1845–50).

Francolinus erkelii, *Gray, List Gall. B.* iii. p. 33 (1844); *Rüppell, N.O.-Afr.* p. 106 (1845) [Abyssinia]; *Gray, Gen. B.* iii. p. 505 (1846); *Heugl. J. f. O.* 1862, p. 412 [Shoa: Galla]; *Gray, List Gallinæ Brit. Mus.* p. 51 (1867); *Finsch, Trans. Zool. Soc.* vii. p. 293 (1870) [Senafé, Maragaz]; *Blanf. Geol. & Zool. Abyss.* p. 423 (1870) [Senafé, Anseba, Undul]; *Gray, Hand-l. B.* ii. p. 265 no. 9662 (1870); *Heugl. Orn. N.O.-Afr.* ii. p. 882 (1873) [Bogos, Massowah, Wogara]; *Antin. et Salvad. Cat. Ucc.* p. 134 (1873) [Keren, Bogosland]; *Salvad. Ann. Mus. Civ. Genov.* xxi. p. 211 (1884) [Shoa]; *Giglioli, Ann. Mus. Civ. Genov.* xxvi. p. 61 (1888); *Salvad. l. c.* pp. 308, 540 (1888); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 368 (1891); *Grant, Ibis*, 1892, p. 51.

Chœtopus erkeli, *Bonap. C. R.* xlii. p. 882 (1856).

? Francolinus icteropus, *Heugl. J. f. O.* 1862, p. 412 [Semien, Abyssinia]; *Hartl. P. Z. S.* 1865, p. 666, pl. 39. fig. 2; *Heugl. Orn. N.O.-Afr.* ii. p. 885 (1873); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 370 (1891).

Adult male. Forehead, lores, and superciliary stripes black with white shafts; top of the head chestnut. Feathers of the neck chestnut, edged with grey, shading into white towards the extremity; those of the upper back and lesser and median wing-coverts grey or greyish brown, widely edged on both webs with dark chestnut, and the former have in addition more or less wide shaft-stripes of the same colour or sometimes nearly black. Scapulars umber-brown, with white shafts and blotched on the margin of the inner or both webs with blackish brown; lower back, rump, and upper tail-coverts umber-brown. Primaries and secondaries and their coverts the same. A white patch behind the eye; ear-coverts reddish brown, and rest of the sides of the face black with white shaft-stripes. Chin and throat white. Chest grey, shading into white on the breast and rest of underparts, each feather with an oblong dark chestnut, sometimes black, spot at the extremity of the shaft; flank-feathers the same, but widely margined with chestnut on either web. Tail-feathers dark brown, faintly vermiculated with black towards the extremities of the feathers. Tarsi armed with two pairs of equally developed stout sharp spurs; iris brown; bill black;

legs yellow, dusky on the toes and claws. Total length 17 inches, wing 8·5, tail 4·8, tarsus 2·4.

Younger males resemble the females in having the scapulars, tail-coverts, and tail-feathers more barred with irregular wavy black and buff bars; the buff shaft-stripes, too, on the outer scapulars are wider.

Adult female differs only from the male in having the upper tail-coverts, tail, and outer scapulars barred with wavy bars of buff and black, and the tarsi without spurs. Total length 15 inches, wing 8·1, tail 4·4, tarsus 2·1.

Hab. N.E. Africa: Bogos, Eastern Abyssinia to Shoa, and westwards to Wogara, 2500 to 11,000 feet.

a, *b*. ♂ ♀ ad. st.	Abyssinia.	
c, *d*. ♂ ad. sk.	Abyssinia (*W. Jesse*).	Hume and Salvin-Godman Colls.
e. ♂ ad. sk.	Abyssinia.	Purchased.
f. ♂ ad. sk.	Haikhallat, Tigré, May (7000 feet).	W. T. Blanford, Esq. [C.].
g. ♀ ad. sk.	Senafé, March (7000 feet).	W. T. Blanford, Esq. [C.].
h, *i*. ♀ ad. sk.	Senafé, April, May (*W. Jesse*).	Tweeddale Coll.
k. ♂ ad. sk.	Shoa, Feb. (*Antinori*).	Shelley Coll.
l–p. ♂ ♀ ad. sk.	Ankobar, Shoa, May, July, Sept. (*Harris*).	India Museum [P.].
q. ♂ ad. sk.	Aramba, Shoa, Dec. (*Harris*).	India Museum [P.].

7. PTERNISTES.

Type.

Pternistis, *Wagler, Isis*, 1832, p. 1229 ..... P. nudicollis.
Pternistes, *Gray, List Gen. B.* p. 61 (1840).

Similar to *Francolinus*, but with a naked throat.

Range. Africa.

Key to the Species.

A. Feathers of the back and scapulars with dark brown shaft-stripes.
  a. Neck-feathers black, with white or pale buff margins.
    a'. Feathers of the lower breast and belly uniform black, or black or rufous brown with a white band down the centre, and often a blackish shaft-streak.
      a''. Feathers from the gape to the cheek black (freckled with white in the females and young).
        a'''. Sides of the feathers of the lower breast and belly black; with spurs. *nudicollis* ♂, p. 174.
        b'''. Sides of the feathers of the lower breast and belly rufous brown; no spurs..... *nudicollis* ♀, p. 174.

b''. Feathers from the gape to the cheek white.
c'''. Feathers of lower breast and belly black ..... *humboldti* ♂, p. 176.
d'''. Feathers of the lower breast and belly black, with a narrow white stripe down the middle ..... *humboldti* ♀, p. 176.
b'. Feathers of the lower breast and belly white, with a wide central band of black down the middle of each feather.
c''. Upper chest grey, each feather finely dotted towards the extremity with black; with spurs ..... *afer* ♂, p. 177.
d'. Chest brownish grey, with black shaft-stripes; no spurs ..... *afer* ♀, p. 177.
c'. Feathers of the lower breast and belly white, finely vermiculated with black, and widely margined with chestnut.
e''. Without black shaft-streaks ..... *cranchi* ♂ ♀, p. 178.
f''. With black shaft-streaks..... *boehmi* ♂ ♀, p. 179.
d'. Feathers of the lower breast and belly umber-brown, like those of the back, with dark shaft-streaks; feathers of the middle of the belly mottled on the sides.
g''. Edged with dark chestnut ..... *swainsoni* ♂, p. 180.
h''. Not edged with chestnut ..... *swainsoni* ♀, p. 180.
b. Neck-feathers white, with black and rufous-brown margins; under surface white, with broad rufous-brown margins and black shaft-stripes ..... *rufopictus*, p. 180.

B. Feathers of the back and scapulars with white shaft-stripes.
c. Feathers of the chest white, edged with brown ..... *leucoscepus* ♂ ♀, p.181.
d. Feathers of the chest brown, shading into chestnut towards the base, and with a narrow white shaft-stripe, forming a triangular white patch, at the extremity. *infuscatus* ♂ ♀, p. 182.

1. Pternistes nudicollis.

Le Gorge-nue, *Buffon, Hist. Nat.* ii. p. 444 (1771).
Bare-necked Partridge, *Lath. Gen. Syn.* ii. p. 759 (1783).
Tetrao nudicollis, *Bodd. Tabl. Pl. Enl.* p. 11. no. 180 (1783); *Gmel. Syst. Nat.* i. p. 759 (1788).
Perdix nudicollis, *Lath. Ind. Orn.* ii. p. 644 (1790); *Bonnat. Tabl. Encycl. Méth.* i. p. 215 (1791); *Temm. Pig. et Gall.* iii. pp. 317, 720 (1815) [part.]; *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 236 (1817); *Less. Traité d'Orn.* p. 504 (1831).
Francolinus capensis, *Steph. in Shaw's Gen. Zool.* xi. p. 333 (1819) [part.].
Pternistis capensis, *Wagl. Isis*, 1832, p. 1229.
Pternistes nudicollis, *Gray, List Gall. B.* iii. p. 32 (1844); *Blyth, Cat. B. Mus. As. Soc.* p. 250 (1849); *Sharpe, in Layard's B. S.*

Afr. p. 589 (1884) [Maritime Dist. of Cape Colony: Swellendam to E. London]; *Grant, Ibis*, 1892, p. 53.

Francolinus nudicollis, *Gray, Gen. B.* iii. p. 506 (1846); *Layard, B. S. Afr.* p. 268 (1867); *Gray, List Gallinæ Brit. Mus.* p. 48 (1867); *Layard, Ibis*, 1869, p. 375; *Gray, Hand-l. B.* ii. p. 264, no. 9647 (1870); *Barratt, Ibis*, 1876, p. 209 [Lydenburg: Chalumna, Brit. Kaffraria]; *Holub u. Pelz. Orn. S.-Afr.* p. 187 (1882); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 314 (1891).

Adult male. Lores, forehead, and superciliary stripe black; top of the head brown, with blackish shaft-stripes; feathers of the sides of the throat and neck black, margined on the sides with white; those of the mantle grey dotted with black, and with very wide black shaft-stripes. Rest of the upper parts umber-brown, with black shaft-stripes, narrowest on the wing-coverts, lower back, rump, and upper tail-coverts. Primaries, primary-coverts, and secondaries brown, the latter with the inner web and the greater part of the outer much darker. Ear-coverts dirty white; feathered part of the side of the face black. Feathers of the chest and rest of underparts black, with white shaft-stripes and an oblong black terminal spot at the end of the shaft; some of the long feathers of the sides and flanks have in addition a narrow black shaft-stripe within the white, and are margined on one or both webs with very dark chestnut. Tail brown, faintly dotted with blackish. Tarsi with a sharp pair of spurs. Naked skin round the eye and on the chin and throat bright crimson. Bill orange-red; legs and feet the same. Iris brown. Total length 15·5 inches, wing 7·9, tail 3·7, tarsus 2·4.

A younger male resembles the adult female in having a grey chest, but the outer webs of the secondaries, as in the younger female, are finely mottled with rufous buff, and a pair of short blunt spurs are present.

Adult female. Differs from the male in having the feathers of the sides of the face and neck more widely edged with white; the chest grey, each feather with a narrow dark rufous shaft-stripe and narrowly margined on the sides with the same colour; and the tarsi without spurs. Total length 13·5 inches, wing 7·3, tail 3·4, tarsus 2·1.

Younger females have all the feathers of the chest, breast, and belly widely edged with chestnut, and the scapulars and the outer secondaries are vermiculated with rufous buff. The skin of the throat is thinly covered with scattered feathers.

Hab. South Africa: Transvaal, Cape Colony.

a. ♂ imm. sk.	Lydenburg.	F. A. Barratt, Esq. [P.].
b. ♂ ad. sk.	Cape Colony.	F. Thackeray, Esq. [P.].
c. ♀ ad. sk.	Cape of Good Hope.	Hardwicke Bequest.
d. ♀ ad. st.	Cape of Good Hope.	
e, *f*. ♀ imm. sk.	South Africa.	Shelley Coll. & J. Rocke, Esq. [P.].
g. ♂ ad. sk.	South Africa.	Mrs. Stirling [P.].

2. Pternistes humboldti.

Francolinus humboldti, *Peters, MB. Akad. Wissensch. Berl.* 1854, p. 134 [Tete]; *Kirk, Ibis*, 1864, p. 330 [Manganja Hills, Zambesi]; *Gray, List Gallinæ Brit. Mus.* p. 48 (1867); *Finsch & Hartl. Vög. Ost-Afr.* p. 581 (1870); *Gray, Hand-l. B.* ii. p. 264, no. 9648 (1870); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 318 (1891).

Pternistes humboldti, *Bocage, J. f. O.* 1876, p. 304; *Sharpe, ed. Layard's B. S. Afr.* p. 589 (1884); *Shelley, P. Z. S.* 1889, p. 370 [Tana R.]; *Grant, Ann. Mag. N. H.* (6) vii. p. 145 (1891); *id. Ibis*, 1892, p. 53.

Francolinus nudicollis, *Fischer & Reich. J. f. O.* 1879, p. 339 [Kipini]; *Shelley, P. Z. S.* 1881, p. 597 [Dar-es-Salaam].

Francolinus (Pternistes) leucoparæus, *Fischer & Reich. J. f. O.* 1884, p. 263.

Pternistes nudicollis, *Fischer, J. f. O.* 1885, p. 121 [Usegua]; *Reich. J. f. O.* 1889, p. 270 [Quilimane].

Pternistes leucoparæus, *Fischer, J. f. O.* 1885, p. 121 [Kipini]; *Matschie, J. f. O.* 1889, p. 340; *Reich. J. f. O.* 1890, p. 77.

Francolinus leucoparæus, *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 317 (1891).

Adult male. Upper parts as in *P. nudicollis*, but the lores are white, the indistinct superciliary stripe black and white, and the dark shaft-stripes of the feathers of the back &c. scarcely extend beyond the shafts themselves, as in *P. afer*. Ear-coverts brownish; feathered parts of the sides of the face and throat white, entirely surrounding the naked skin of the chin, throat, and fore part of the neck; sides of the neck black. Feathers of the chest, sides, and flanks whitish grey, narrowly margined with black on both webs, and with a moderately wide black shaft-stripe. Breast and belly black; thighs, vent, and under tail-coverts brownish grey, more or less mottled with black, and with dark shafts. Tarsi with two pairs of spurs, the upper pair short and blunt. Naked skin round the eye and on the chin and throat blood-red. Bill and legs the same colour. Total length 14 inches, wing 7·4, tail 3·5, tarsus 2·4.

Adult female. Resembles the male generally, but differs in having the lores black and white, the sides of the neck like the back white, with a wide black band down the middle; the breast and belly show here and there, among the black, feathers with remains of narrow white shaft-stripes; some of the scapulars and outer secondaries irregularly barred and spotted with black; and the tarsi are not armed with spurs. Total length 13·5 inches, wing 7, tail 2·9, tarsus 2·2.

In an immature specimen the cheeks and sides of the face are white with black shaft-stripes, the feathers of the breast and belly are black with a white band on either side of the black shaft. On the upper parts the shaft-stripes are wider, and most of the feathers of the lower back and scapulars are barred and spotted with black.

Hab. East Africa: from the Zambesi to the River Tana.

a. ♀ ad. sk.	Manganja Hills, Zambesi Dist.	Sir John Kirk [P.].
b. ♂ ad. st.	Mazoro (*Sir J. Kirk*).	Livingstone Exped.
c. ♀ imm. sk.	Dar-es-Salaam (*Sir J. Kirk*).	Shelley Coll.
d. ♀ ad. sk.	River Tana. Sept.	H. C. V. Hunter, Esq. [P.].

3. Pternistes afer.

La Perdrix d'Afrique, *D'Aubent. Pl. Enl.* ii. pl. 48 (no. 180).
La Perdrix rouge d'Afrique, *Buff. Hist. Nat.* ii. p. 444 (1771).
Tetrao afer, *Müll. S. N. Suppl.* p. 129 (1776).
Red-necked Partridge, *Lath. Gen. Syn.* ii. p. 771 (1783); *id. Gen. Hist.* viii. p. 266 (1823).
Tetrao rubricollis, *Gmel. Syst. Nat.* i. p. 758 (1788).
Perdix rubricollis, *Lath. Ind. Orn.* ii. p. 648 (1790); *Bonn. Tabl. Encycl. Méth.* i. p. 208, pl. 94. fig. 3 (1791).
Perdix nudicollis, *Temm. Pig. et Gal.* iii. pp. 317, 720 (1815) [part.].
Francolinus rubricollis, *Steph. in Shaw's Gen. Zool.* xi. p. 335 (1819); *Gray, Gen. B.* iii. p. 506 (1846) [part.].
Pternistes sclateri, *Bocage, J. Sc. Lisb.* i. p. 327, pl. vi. (1868) [Mossamedes], ii. p. 49 (1868) [Huilla]; *id. J. f. O.* 1876, p. 303.
Pternistes rubricollis, *Bocage, J. Sci. Lisb.* iii. p. 175 (1871), iv. p. 199 (1872) [Humbe], vi. p. 69 (1877) [Benguela], pp. 149, 207 (1878) [Caconda]; *id. Orn. Angola*, p. 400 (1881) [Mossamedes, Benguela, and Dande Bay]; *Sharpe's ed. Layard's B. S. Afr.* p. 589 (1884); *Sousa, J. Sci. Lisb.* xi. p. 167 (1886) [Fazenda Maravilha], xii. p. 102 (1887) [Quissange], p. 228 (1888) [Quindumbo], (2) i. p. 116 (1889) [Catumbella]; *Büttikofer, Notes Leyd. Mus.* xi. p. 76 (1889) [Upper Cunene].
Pternistes nudicollis, *Gurney's ed. Anderss. B. Damaraland*, p. 244 (1872) [? Damaraland].
Francolinus sclateri, *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 330 (1891).
Pternistes afer, *Grant, Ibis*, 1892, p. 53.

Adult male. Upper parts, wings, and tail resemble those of *P. nudicollis*, but the lores and superciliary stripes are pure white, and the dark shaft-streaks on the feathers of the back are much narrower, scarcely extending beyond the shafts themselves. Ear-coverts brown edged with white, feathers on the sides of the face and throat pure white, those of the neck black, margined on either side with white. Upper chest grey, finely dotted towards the extremity with black, and with black brown-edged shaft-stripes; rest of the underparts white, with a wide black band down the centre of each feather. Tarsi with two pairs of spurs, the lower long and sharp, the upper short and blunt. Iris brown. Naked skin round the eye and on the chin and throat red. Bill, legs, and feet red. Total length 14 inches, wing 7·1, tail 3·1, tarsus 2·2.

Adult female. Differs from the male in having the whole chest brownish grey with blackish shaft-stripes; the upper surface with wider dark shaft-stripes; a smaller patch of white on the lores and the tarsi without spurs. Total length 12·5 inches, wing 6·5, tail 2·8, tarsus 1·9.

Immature birds have the outer secondaries and long scapulars barred and blotched with black and reddish buff; the outer webs of the inner secondaries are reddish buff thickly freckled with black;

the loral patch more black than white; and some of the feathers of the cheek with black shaft-stripes.

Hab. Western South Africa: Mossamedes, Benguela, Angola.

a. ♂ imm. sk.	River Quanza.	R. B. Sharpe, Esq. [P.].
b. ♀ ad. sk.	Quissange, Nov. (*Anchieta*).	Lisbon Museum [P.].
c. ♂ ad. sk.	Barra do Dande, March (*Anchieta*).	Lisbon Museum [P.].
d. ♂ ad. st.	Maconjo, Benguela.	Lisbon Museum [P.].
e–g. ♂ ad.; ♀ imm. sk.	Huilla, Feb., March (*Anchieta*).	Shelley Coll.

4. Pternistes cranchi.

Perdix cranchii, *Leach, in Tuckey's Narrat. Explor. River Zaire*, App. p. 408 (1818) [Congo R.].

Francolinus cranchii, *Steph. in Shaw's Gen. Zool.* xi. p. 336 (1819); *Gray, Gen. B.* iii. p. 506 (1846); *id. List Gallinæ Brit. Mus.* p. 49 (1867); *id. Hand-l. B.* ii. p. 264, no. 9651 (1870); *Schalow, J. f. O.* 1887, p. 229 [Marungu]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 331 (1891).

Pternistes cranchii, *Wagl. Isis*, 1832, p. 1229; *Gray, List Gall. B.* iii. p. 32 (1844); *Hartl. J. f. O.* 1854, p. 210; *id. Orn. W.-Afr.* p. 202 (1857); *Sharpe & Bouv. Bull. Soc. Zool. Fr.* i. p. 52 (1876) [Chinchonxo); *Matschie, J. f. O.* 1887, p. 147 [Marungu]; *Grant, Ibis*, 1892, p. 54.

Perdix punctulata, *Gray, Ill. Ind. Zool.* ii. pl. 43. fig. 3 (1833–4).

Arboricola punctulata, *Blyth, Ibis*, 1867, p. 160.

Pternistes lucani, *Bocage, J. Sc. Lisb.* vii. p. 68 (1879) [Landana]; *Reich. & Schalow, J. f. O.* 1879, p. 423; *Bocage, Orn. Angola*, p. 402 (1881) [Loango Coast].

Francolinus lucani, *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 326 (1891).

Adult male. Lores black. Superciliary stripes and feathers on the sides of the face (except the ear-coverts, which are brown) black, narrowly margined with white. Top of the head brown. Feathers of the neck, mantle, chest, and sides finely mottled with black and white; rest of the upper parts umber-brown, finely mottled and dotted with black, and with darker brown shaft-stripes. Quills brown, the outer webs of the primaries mottled with buff, those of the secondaries with black. Breast and belly like the chest, but each feather is widely margined on both webs with chestnut. Vent and under tail-coverts brownish buff mottled with black. Tail brown, faintly dotted with black. Tarsi armed with a pair of sharp spurs. Iris brown, naked skin round the eye and on the chin and throat crimson-red; bill and legs the same. Total length 14 inches, wing 7·3, tail 3·1, tarsus 2·2.

Adult female. Differs from the male in having the feathers of the back of the neck brown edged with white, and with dark shaft-stripes, those of the mantle like the back; the feathers of the breast and belly much less conspicuously edged with chestnut, and the tarsi without spurs. Total length 12 inches, wing 6·8, tail 3, tarsus 1·9.

In *young specimens* the shaft-streaks of the back and upper parts are wider and blacker, and the feathers, especially the scapulars, are barred with buff. The chin and throat are thinly covered with whitish feathers. Most of the underparts are white, widely barred with blackish brown, shading into brownish buff towards the margins, others are partially or entirely finely mottled with black as in the adult. Both webs of the quills are mottled with rufous buff.

Hab. West Africa: Congo and Loango Coast, ranging to Marungu, south-west of Lake Tanganyika.

a, b. ♀ ad. et imm. sk.	Landana (*Dr. A. Lucan*).	Shelley Coll.
c–h. ♂ ♀ ad. et imm. sk.	Landana, March, Sept.	M. L. Petit [C.].
i. ♀ ad. sk.	Congo (*J. Cranch*).	Congo Expedition. (Type of the species.)

5. Pternistes boehmi.

Francolinus cranchii, *Sclat.* (*nec Leach*), *P. Z. S.* 1864, p. 113 [Usui]; *Finsch & Hartl. Vög. Ost-Afr.* p. 579, pl. ix. (1870); *Heugl. Orn. N.O.-Afr.* ii. p. 902 (1873) [Usui]; *Böhm, J. f. O.* 1882, p. 194 [Ugalla River]; *Schalow, J. f. O.* 1883, p. 341 [Kakoma]; *Matschie, J. f. O.* 1887, p. 139 [Karema].

Pternistes böhmi, *Reich. J. f. O.* 1885, p. 465 [Gonda], 1887, p. 52 [Soboro, Ugogo]; *Matschie, J. f. O.* 1887, pp. 135, 156; *Reich. J. f. O.* 1891, p. 143 [Unyamuesi, Unyanyembe]: *Grant, Ibis,* 1892, p. 54.

Francolinus rubricollis, *Böhm, J. f. O.* 1885, pp. 39, 71 [Gonda].

Francolinus boehmi, *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 324 (1891).

Adult male and female. Upper parts as in *P. cranchi*; upper breast-feathers white with black shaft-stripes and vermiculated with black, those of the belly white with black shaft-stripes and wide reddish-brown margins, with small submarginal black bands. Naked skin round the eye red, on the chin and throat yellow. Bill and feet red; iris brown. Wing 6·8–7·2 inches, tail 3, tarsus 2·2.

Hab. Central East Africa: east of Lake Tanganyika; Usui, Victoria Nyanza; Unyamuesi, Unyanyembe and Ugogo.

6. Pternistes swainsoni.

Perdix swainsoni, *Smith, Rep. Exp. Cent. Afr.* p. 54 (1836) [Rivers S. of Kurrichaine].

Francolinus swainsoni, *Smith, Ill. Zool. S. Afr.* pl. 12 (1838); *Gray, Gen. B.* iii. p. 506 (1846); *Strickl. & Sclat. in Jard. Contr. Orn.* p. 157 (1852) [Damaraland]; *Gray, List Gallinæ Brit. Mus.* p. 48 (1867); *Layard, B. S. Afr.* p. 269 (1867); *Newton, Ibis,* 1868, p. 268; *Chapman's Trav. S. Afr.* ii. App. p. 412 (1868) [Middle and North Damaraland]; *Ayres, Ibis,* 1869, p. 297 [Transvaal]; *Gray, Hand-l. B.* ii. p. 264, no. 9651 (1870); *Buckley, Ibis,* 1874, p. 386 [Pretoria to Matabele]; *Barratt, Ibis,* 1876, p. 209 [Lydenburg Dist.]; *Ayres, Ibis,* 1877, p. 346 [Waterberg Dist., Transvaal];

id. Ibis, 1880, p. 109 [Rustenburg, Limpopo, and Eland's R.]; *Shelley, Ibis*, 1882, p. 360 [Inshlangeen and Quae-quae Rivers, Matabele]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 327 (1891).

Pternistes swainsoni, *Gray, List Gall. B.* iii. p. 32 (1844); *Gurney's ed. Anderss. B. Damaraland*, p. 244 (1872) [N. Damaraland]; *Grant, Ibis*, 1892, p. 54; *Sharpe's ed. Layard's B. S. Afr.* p. 587 (1884); *Ayres, Ibis*, 1886, p. 292 [Limpopo R.].

Adult male. Lores black, margined with brown. Feathers of the top of the head, back, rest of upper parts, chest, breast, sides, flanks, thighs, and under tail-coverts umber-brown, finely dotted with black towards the extremities, and with narrow dark shaft-stripes except on the head, where they are nearly obsolete, and on the mantle and long scapulars, where they are considerably wider and darker; back and sides of the neck and feathered parts of the face black, with white margins; ear-coverts brown. Feathers of the belly brownish buff, mixed with white towards the margins, mottled with black and with black shaft-stripes, forming a blotch towards the extremities; most of the feathers, as well as those of the breast, are margined on the sides with chestnut. Primaries, secondaries, and tail brown, the outer webs of the secondaries and the tail-feathers vermiculated with black. Naked skin round the eyes and on the chin and throat dark rose-red. Bill black, with the lower mandible and bare skin over the nostrils red. Legs and feet black, with a ruddy tinge. Iris brown. Tarsi with a long sharp pair of spurs, sometimes supplemented by a second rudimentary pair. Total length 14 inches, wing 8, tail 3·1, tarsus 2·4.

Adult female. Resembles the male, but most of the feathers of the belly resemble the chest and breast, and are without the chestnut margins which are conspicuous in the male. There are no spurs on the tarsi. Total length 12·5 inches, wing 6·9, tail 2·9, tarsus 1·9.

Hab. South Africa; Matabele, Transvaal, Damaraland.

a. ♀ ad. sk.	Inshlangeen River, June (*J. S. Jameson*).	Shelley Coll.
b. ♂ ad. sk.	Limpopo River, Aug. (*T. Ayres*).	J. H. Gurney, Esq. [P.]
c. ♂ ad. sk.	Transvaal.	J. H. Gurney, Esq. [P.].
d. ♀ ad. sk.	Lydenburg Dist.	F. A. Barratt, Esq. [P.].
e. ♂ ad. sk.	S. Africa.	
f. ♀ ad. st.	S Africa.	

7. Pternistes rufopictus.

Pternistes rufopictus, *Reich. J. f. O.* 1887, p. 52 [Wembaere]; *Hartl. Abh. nat. Ver. Brem.* xii. p. 40 (1891) [Ussambiro]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 366 (1891); *Grant, Ibis*, 1892, p. 55.

Adult male. Top of the head dark brown; superciliary streak white, edged above with black; naked sides of the head margined below with a black band, beneath which is a white line which borders the naked chin on either side. Feathers of the fore neck grey, with black shaft-streaks, those of the rest of the under surface white,

with broad rufous-brown margins and black shaft-streaks. Middle of the belly greyish white; the small feathers on the hinder sides of the head black, margined with white on the sides. Neck-feathers with black and rufous-brown edges on either side of the white middle. The feathers of the upper back and wing-coverts grey in the middle, with blackish-brown shafts and transversely barred; rump and tail-feathers grey, with thicker darker cross-bars. Wings dark brown, with clearer rust-red cross-bars. Iris brown; naked skin round the eye orange-red, on the throat orange-yellow. Upper mandible reddish brown, lower reddish. Legs dark brown. Total length 15·6 inches, wing 8·4, tail 3·2, tarsus 2·8.

Hab. Equatorial Africa; Wembaere Steppes, Ussambiro, and Unyoro.

a. Ad., head and neck only.	Between Victoria and Albert Nyanza.	Canon Tristram [P.].

8. Pternistes leucoscepus. (Plate VIII.)

Perdix rubricollis, *Cretzschm.* (*nec Gmel.*), *Rüpp. Atl.* p. 44, pl. 30 (1826) (fig. resembles *P. infuscatus*); *Rüppell, N. Wirbelth.* p. 11 (1835) [Massouah].

Pternistes rubricollis, *Wagl. Isis*, 1832, p. 1229.

Pternistes rubricollis, *Gray, List Gall. B.* iii. p. 32 (1844); *Heuglin, Ibis*, 1859, p. 343 [Tadjura]; *Heugl. J. f. O.* 1862, p. 411; *Blanf. Geol. & Zool. Abyss.* p. 426 (1870) [Komayli].

Francolinus rubricollis, *Gray, Gen. B.* iii. p. 506 (1846) [part.]; *Finsch, Trans. Zool. Soc.* vii. p. 292 (1870) [Sahati, Rairo]; *Finsch & Hartl. Vög. Ost-Afr.* p. 576 (1870); *Gray, Hand-l. B.* ii. p. 264, no. 9649 (1870); *Antin. Mem. Soc. Geogr. Ital.* i. p. 183 (1878); *Sclater, P. Z. S.* 1884, p. 389 [Berberah]; *Salvad. Ann. Mus. Civ. Genov.* xxi. p. 272 (1884) [Shoa]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 319 (1891).

Pternistes asiatica, *Licht. Nomencl. Av.* p. 84 (1854).

Francolinus leucoscepus, *Gray, List Gallinæ Brit. Mus.* p. 48 (1867); *Bocage, J. Sci. Lisb.* iii. p. 178 (1871); *Heugl. Orn. N.O.-Afr.* ii. p. 899 (1873); *Antin. & Salvad. Cat. Uce.* p. 136 (1873); *Ragazzi, Boll. Soc. Geogr. Ital.* 1887, p. 348.

Pternistes leucoscepus, *Salvad. Ann. Mus. Civ. Genov.* xxvi. p. 308 (1888) [R. Hawasch]; *Grant, Ibis*, 1892, p. 55.

Francolinus (Pternistes) rubricollis, *Hartert, Kat. Mus. Senckenb.* p. 194 (1891).

Adult male and female. Lores whitish, edged and sometimes tipped with brown; feathers of superciliary stripe white, with brown shaft-stripes. Top of the head darkish brown, most of the feathers with whitish-buff shafts. Back and sides of the neck brown, each feather margined with white, and with a reddish-buff shaft-stripe shading into buff at the extremity; rest of the upper parts brown, shading into grey towards the margins, and each with a moderately wide white shaft-stripe, widest at the extremity: the outer scapulars, rump, and upper tail-coverts are also finely vermiculated with black and buff. Primaries, primary-coverts, and secondaries brown, the outer primaries with the outer web margined with buff

and with a large patch of the same colour on the outer half of the inner web, secondaries thickly vermiculated with buff on the outer web and on the tip of the inner. Ear-coverts brown; feathers on the sides of the face white, with brown shafts. Chest, breast, and thighs dull brown, with very wide white shaft-stripes extending nearly halfway to the base of the feathers, so that white is the predominating colour of the chest and breast. Belly, sides, and flanks similarly coloured; but the brown parts are mostly dull reddish chestnut, and the basal half is edged on either web with pure white. Under tail-coverts buff, dotted on the sides with black. Tail rufous buff, thickly vermiculated with black. Iris brown. Legs reddish dusky; bill dusky, gape reddish; naked skin round the eyes, chin, and throat scarlet, shading inth yellow on the neck. Male with a sharp pair of spurs, often supplemented by a second rudimentary blunt pair.

Male. Total length 15 inches, wing 8·1, tail 3·6, tarsus 2·5.

Female. Total length 13·5 inches, wing 8·1, tail 3·3, tarsus 2·2.

Hab. North-east Africa; Massouah, Bogos, Abyssinia, Berberah.

a, b. ♂ ad. sk.	Rairo, Massouah, Aug. (*W. Jesse*).	Tweedale Coll.
c. ♂ ad. sk.	Ain, Lebka Valley, Massouah, Aug.	W. T. Blanford, Esq. [P.].
d. ♀ ad. sk.	Haddas River, Massouah, June.	W. T. Blanford, Esq. [P.].
e, f. ♂ ♀ ad. sk.	Sahati, Massouah, June (*W. Jesse*).	Salvin-Godman and Shelley Colls.
g. ♀ ad. sk.	Koomayli, Massouah, June (*W. Jesse*).	Salvin-Godman Coll.
h. ♀ ad. sk.	Abyssinia.	(Type of species.)
i. ♂ ad. st.	Abyssinia.	Dr. Rüppell [P.].

9. Pternistes infuscatus.

Pternistes rubricollis, *Rüppell* (*nec Gmel.*), *Orn. N.O.-Afr.* p. 106 (1845); *Speke, Ibis*, 1860, p. 248 [Somali Land]; *Reich. J. f. O.* 1891, p. 143 [Ugogo].

Pternistes infuscatus, *Cabanis, J. f. O.* 1868, p. 413 [Lake Jipe]; *id. v. d. Decken's Reis.* iii. p. 44, pl. 14 (1869); *id. J. f. O.* 1878, p. 244; *Fisch. Zeit. ges. Orn.* i. p. 383 (1884) [Chaga Dist.]; *id. J. f. O.* 1885, p. 120 [Paré, Pangani]; *Shelley, P. Z. S.* 1889, p. 370 [Useri River]; *Grant, Ibis*, 1892, p. 55; *Sharpe, Ibis*, 1892, p. 552.

Francolinus infuscatus, *Finsch & Hartl. Vög. Ost-Afr.* p. 578 (1870); *Shelley, P. Z. S.* 1882, p. 310 [Mamboio]; *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 322 (1891).

Pternistes clappertoni, *Shelley, Ibis*, 1888, p. 295 [Taveita and Merereni].

Adult male and female. Closely resemble *P. leucoscepus*, from which they differ in the following points:—None of the feathers of the crown have whitish-buff shafts; the feathers of the neck and upper back are washed with chestnut, and the white shaft-stripes on the upper parts are narrower and much less distinct on the

scapulars, rump, and upper tail-coverts, which are vermiculated with pale buff and black. More of the primaries (about seven) have the large buff patch on the inner web; and all the feathers of the chest and underparts have the basal two thirds mostly dark chestnut, while the shaft-stripe is little more than a moderately large white triangular spot situated at the extremity of each feather.

Younger specimens have the scapulars, secondaries, rump, upper tail-coverts, and tail barred with buff edged with black; primaries blotched and mottled with buff to the extremities.

Hab. East Africa: from Mamboio northwards to Kilimanjaro, Teita district; and Somali Land.

a, b. ♂ ♀ ad. sk.	Kilimanjaro.	F. J. Jackson, Esq. [P.].
c, d. ♂ ♀ ad. sk.	Useri River, July.	H. C. V. Hunter, Esq. [P.].
e, f. ♂ ♀ imm. sk.	Teita District, July.	Dr. F. M. Hildebrandt [C.].
g. ♂ ad. sk.	Mamboio (*Sir J. Kirk*).	Shelley Coll.
h. ♀ ad. sk.	Somali Land.	Lieut. H. E. Barnes [P.].

8. RHIZOTHERA.

Type.

Rhizothera, *Gray, List Gen. B.* 2nd ed. p. 79 (1841); *id. Gen. B.* iii. p. 505 (1846) ..... R. longirostris.

Tail with 12 feathers, rather more than half the length of the wing.

1st primary equal to the 10th, 6th slightly the longest.

Tarsi longer than middle toe and claw, and provided in both sexes with a pair of short stout spurs. Claws moderate, slightly curved.

Range. Southern part of the Malay Peninsula, Sumatra, and Borneo.

1. Rhizothera longirostris.

Perdix longirostris, *Temm. Pig. et Gall.* iii. pp. 323, 721 (1815) [Sumatra]; *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 237 (1817); *id. Tabl. Encycl. Méth.* i. p. 368 (1823).

Francolinus longirostris, *Steph. in Shaw's Gen. Zool.* xi. p. 317 (1819); *Gray, Ill. Ind. Zool.* ii. pl. 45. fig. 2 (1833–34); *Gray, Gen. B.* iii. p. 506 (1846); *Gray, List Gallinæ Brit. Mus.* p. 53 (1867); *Schaeck, Mém. Soc. Zool. Fr.* iv. p. 312 (1891).

Tetrao curvirostris, *Raffl. Trans. Linn. Soc.* xiii. p. 323 (1822) [Sumatra].

Long-billed Partridge, *Lath. Gen. Hist.* viii. p. 282 (1823).

Curve-billed Partridge, *Lath. Gen. Hist.* viii. p. 279 (1823).

Rhizothera longirostris, *Gray, List Gen. B.* p. 79 (1841); *id. Hand-l. B.* ii. p. 266, no. 9686 (1870); *Wald. Ibis*, 1872, p. 383 [Busan and Marup, N. Borneo]; *Salvad. Ucc. Borneo*, p. 310 (1874); *Kelham, Ibis*, 1882, p. 4 [Perak]; *Everett, List B. Borneo*, p. 199 (1889) [Borneo].

Rhizothera curvirostris, *Blyth, Cat. B. Mus. As. Soc.* p. 252 (1849) [Malacca].

Ortygornis longirostris, *Reichenb. Syst. Av.* pl. xxviii. (1852).

Adult male. Top of the head rich brown; back of the neck grey, broadly edged on one or both webs with black, and irregularly barred here and there with pale buff and rust; middle feathers of the upper back reddish brown, largely blotched on either web with black and with one or two oblique wavy rust-coloured bars, those on the sides have a wide pale buff shaft-stripe and the outer web greyish vermiculated with buff and dusky and partially edged with chestnut and black. Lower back, rump, and upper tail-coverts grey mottled with pale buff, and some have black spots at the end of the shaft. The scapulars and outer secondaries are chestnut vermiculated with buff and dusky, and margined round the extremity with black often tipped with buff. The primaries, secondaries, and primary-coverts are brown, with irregular bars of rufous buff on the outer web, the outer secondaries being also washed with rufous towards the extremities. Rest of the wing-coverts buff mottled with grey or black, and with a large buff-coloured patch at the extremity. Rest of the head, chin, throat, and upperside of the neck rusty chestnut; the edges of the superciliary stripe and ear-coverts and a narrow line of feathers from the nostril to the gape blackish. Rest of the neck and chest grey, shading into rufous-buff on the breast and rest of underparts. Tail reddish brown with wavy transverse bars of buff and black. Iris light brown. Bill black. Feet reddish grey or white. Tarsi provided with a pair of short stout spurs. Total length 14·6 inches, wing 7·7, tail 3·5, tarsus 2·2.

An immature male has the lower back, rump, and upper tail-coverts bright buff clouded with dusky, as in the adult female, and the feathers of the chest are rufous buff, mixed with grey towards the shaft; otherwise the plumage is much the same as in the adult.

A quite young male resembles the female in general plumage, but the feathers all round the neck have buff shaft-stripes and the chin, throat, and cheeks, middle of the belly, and thighs are whitish.

Adult female. Differs from the adult male in having the neck and cheek rufous chestnut, and the lower back, rump, and upper tail-coverts buff without much grey. Iris reddish brown. Bill black. Feet pale flesh-colour or whitish. Tarsi provided with a short stout pair of spurs. Total length 13·6 inches, wing 7·7, tail 3·3, tarsus 2·1.

Hab. Same as that of genus.

a, *b*. ♂ ♀ ad. sk.	Purlis, Malay Peninsula (*Dr. Cantor*).	India Museum [P.].
c, *d*. ♂ imm. et ♀ ad. sk.	Klaug, Selangore, Oct. (*W. Davison*).	Hume Coll.
e–g. ♂ ♀ ad. sk.	Malacca.	Capt. Stackhouse Pinwill [P.].
h, *i*. ♂ ad. et imm. sk.	Malacca, May (*Dr. A. C. Maingay*).	Tweeddale Coll.
k. ♂ ad. sk.	Johore, Jan.	Hume Coll.

l, m. ♂ ♀ ad. sk.	Sumatra (*Sir T. Raffles*).	India Museum [P.]. (Types of *Tetrao curvirostris*, Raffles.)
n, o. ♂ ♀ ad. sk.	Busan, Sarawak, Borneo, Oct. (*A. H. Everett*).	Tweeddale Coll.
p. ♀ ad. sk.	Marup, July (*A. H. Everett*).	Tweeddale Coll.
q, r. ♀ ad. sk.	[China.]	J. R. Reeves, Esq. [P.].

9. PERDIX.

	Type.
Perdix, *Brisson, Orn.* i. p. 219 (1760)	P. perdix.
Perdrix, *Brünnich, Zool. Fundamenta*, p. 86 (1772) ..	P. perdix.
Starna, *Bonap. Comp. List B.* p. 43 (1838)	P. perdix.
Sacfa, *Hodgson, J. As. Soc. Beng.* xxv. p. 165, plate (1857)	P. hodgsoniæ.

Tail of 16–18 feathers, subequal, the outer pair being only a little shorter than the middle, which are rather more than half the length of the wing.

The 1st primary falls between 7th and 8th, and the 4th is rather the longest.

Tarsus, without spurs, equals the middle toe and claw.

Range. Palæarctic region.

Key to the Species.

A. Tail with 18 feathers; chest and breast not widely barred with black.
  a. Feathers of the sides of the throat are not elongate, horseshoe mark on the breast chestnut if present.
    a'. Lesser and median wing-coverts and scapulars sandy brown, with narrow wavy black cross-lines ..... *perdix* ♂, p. 185.
    b'. Lesser and median wing-coverts and scapulars with the ground-colour of the feathers (except at the extremity) mostly black with wide-set transverse buff bars. *perdix* ♀, p. 185.
  b. Feathers of the sides of the throat elongate and beard-like, horseshoe mark on the breast black if present ..... *daurica* ♂ ♀, p. 192.
B. Tail with 16 feathers; chest and breast widely barred with black.
  c. A black patch on the middle of the lower breast; the black patch on the hinder part of the cheek and side of the throat large. Larger, wing 6·2..... *hodgsoniæ* ♂ ♀, p. 193.
  d. No black patch on the middle of the lower breast; the black patch on the hinder part of the cheek and side of the throat much reduced. Smaller, wing 5·6–5·9 ..... *sifanica* ♂ ♀, p. 195.

1. Perdix perdix.

Tetrao perdix, *Linn. S. N.* i. p. 276 (1766); *Gm. S. N.* i. pt. ii. p. 751 (1788); *Beseke, Beytr. Nat. Vög. Kurl.* p. 71 (1792);

Bechst. Nat. Deutschl. iii. p. 527 (1793); *Pallas, Zoogr. Ross.-As.* ii. p. 77 (1811).

La Perdrix grise, *Buff. Hist. Nat. Ois.* ii. p. 401 (1771); *D'Aubent. Pl. Enl.* ii. pl. 41, no. 27.

La Perdrix grise-blanche, *Buff. Hist. Nat. Ois.* ii. p. 415 (1771).

Common Partridge, *Lath. Gen. Syn.* ii. pt. ii. p. 762 (1783), *Suppl.* ii. p. 279 (1802); *id. Gen. Hist.* viii. p. 283 (1823).

Perdix cinerea, *Lath. Ind. Orn.* ii. p. 645 (1790); *Bonn. Tabl. Encycl. Méth.* i. p. 209, pl. 93. fig. 4 (1791); *Meyer & Wolf, Tasch. Deuts.* i. p. 303 (1810); *Penn. Brit. Zool.* i. p. 368 (1812); *Temm. Pig. et Gall.* iii. pp. 373, 728 (1815); *Meyer, Vög. Liv- u. Esthl.* p. 165 (1815); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 198 (1817); *Steph. in Shaw's Gen. Zool.* xi. p. 339, pl. 23 (1819); *Temm. Man. d'Orn.* ii. p. 488 (1820); *Millet, F. Maine-et-Loire*, ii. p. 392 (1828); *Wern. Atl. Orn. d'Eur.* Ord. 10, pl. 19 (1828); *Vieill. Faun. Franç.* p. 248, pl. 108. fig. 1 (1828); *Roux, Orn. Prov.* ii. pp. 35, 256 (1830); *Brehm, Handb. Vög. Deutschl.* p. 524 (1831); *Montagu, Orn. Dict.* ed. 2, p. 354 (1831); *Ménétr. Cat. Rais.* p. 47 (1832); *Schinz, Nat. Abbild. Vög.* p. 272 (1833); *Selby, Ill. Brit. Orn.* i. p. 433, pl. lxi. (1833); *Naum. Nat. Vög. Deutschl.* vi. p. 478, pl. 163 (1833); *Jard. Nat. Lib., Orn.* iv. p. 95, pl. 1 (1834); *Gould, B. Europe*, iv. pl. 262 [text] (1837); *Schinz, Faun. Helvét.* p. 99 (1837); *Macgill. Brit. B.* i. p. 218 (1837); *Körner, Skand. Fogl.* p. 13, pl. 28. fig. 4 (1839–46); *Crespon, Orn. Gard*, p. 333 (1840); *Démid. Voy. Russ. Mérid.* iii. p. 220 (1840); *Schinz, Europ. Faun.* i. p. 289 (1840); *Bout. Orn. Dauphiné*, p. 68, pl. 42. fig. 4 (1843); *Yarrell, Hist. Brit. B.* ii. p. 333 (1843); *Gray, List of B.* pt. iii. *Gall.* p. 37 (1844); *Degl. Orn. Europ.* ii. p. 57 (1849); *Thomp. Nat. Hist. Irel.* ii. p. 58 (1850); *Kjærboll. Daun. Fugle*, p. 234 (1852); *Walters, N. Hist. B. Irel.* p. 128 (1853); *Schinz, Nat. Vögel*, p. 162, pl. 79 (1853); *Powys, Ibis*, 1860, p. 238 [Albania]; *Companyo, Hist. Nat. Pyrén.* iii. p. 203 (1863); *Bert. Cat. An. l'Yonne*, p. 59 (1864); *Fontaine, Faune Luxemb., Ois.* p. 176 (1865); *More, Ibis*, 1865, p. 428; *Lilford, Ibis*, 1866, p. 384 [N. Spain]; *Gray, List Gallinæ Brit. Mus.* p. 56 (1867); *Collett, Vid. Selsk. Forh. Christ.* 1868, p. 159; *Smith, Ibis*, 1868, p. 450 [Portugal]; *Elwes & Buckl. Ibis*, 1870, p. 328 [Macedonia & Bulgaria]; *Hutton, Ibis*, 1870, p. 397 [N. Zealand, introd.]; *Gray, Hand-l. B.* ii. p. 267 (1870); *Saunders, Ibis*, 1871, p. 223 [not S. of Sierra Morena, Spain]; *Gray, B. West Scotl.* p. 241 (1871); *Severtz. Turkest. Jevotnie*, p. 68 (1873); *Fallon, Ois. Belg.* p. 137 (1875); *Lilford, Ibis*, 1875, pp. 8, 9, 13; *Danford & Brown, Ibis*, 1875, p. 417 [Transylvania]; *Blanf. E. Pers.* ii. p. 273 (1876) [Aderbijan & Elburz]; *Palmén, J. f. O.* 1876, p. 42 [Finland]; *Dresser, Ibis*, 1876, p. 323; *Tacz. Bull. Soc. Zool. Fr.* ii. p. 154 (1877) [Poland]; *Bau, etc. J. f. O.* 1877, p. 325 [Germany]; *Dress. B. Europe*, vii. p. 131, pls. 474 & 475 (1878); *Liebe, J. f. O.* 1878, p. 77; *Cab. J. f. O.* 1878, p. 417 [Germany]; *Garrod, P. Z. S.* 1879, p. 371, figs. 22, 23; *Finsch, Verh. Ges. Wien*, xxix. p. 240 (1880) [Omsk, Semipalatinsk, Sergiopol]; *Danford, Ibis*, 1880, p. 94 [Angora]; *Cab. J. f. O.* 1880, pp. 70, 392, 1882, p. 89, 1883, p. 61 [Germany]; *Booth, Rough Notes*, ii. pp. 1–10 (1881–7); *Saunders, ed. Yarrell's Brit. B.* iii. p. 105 (1882); *Seebohm, Ibis*, 1882, p. 220 [Astrakhan], & 1883, p. 26 [Caucasus]; *Irby, Ibis*, 1883, p. 185 [Santander]; *Mejer, J. f. O.* 1883, p. 392 [Hanover]; *Seebohm, Hist. Brit. B.* ii. p. 452 (1884); *Clarke, Ibis*, 1884, p. 147 [Hungary]; *Saunders, Ibis*, 1884, p 387 [Pyrenees]; *Cab. J. f. O.* 1884, p. 37 [Germany]; *Dedit.*

J. f. O. 1885, p. 207 [St. Petersburg]; *Pleske, Uebers. Vög. Kola-Halbinsel*, p. 297 (1886); *Olphe-Galliard, Faun. Orn. Europe Occ.* fasc. xxxix. p. 22 (1886); *Alléon, Ornis*, 1886, p. 416 [Bulgaria]; *Meyer, Vog.-Skel.* pt. xi. pl. c. (1886); *Mewes u. Homeyer, Ornis*, 1886, p. 247 [Olonetz, N. Russia]; *Hartert, J. f. O.* 1887, p. 263 [Lower Rhine]; *Leverk. J. f. O.* 1887, p. 208; *Salvad. El. Uec. Ital.* p. 200 (1887); *Lilford, Birds Brit. Isl.* pt. ix. pl. (1888); *Pleske, Mém. Ac. St. Pétersb.* (7) xxxvi. no. 3, p. 47 (1888) [Turkestan]; *Knaut. J. f. O.* 1888, p. 36 [Zobtin, Silesia]; *Tacz. Ornis*, 1888, p. 487 [Poland]; *Saund. Ill. Man. Brit. B.* p. 487 (1889); *Leverk. J. f. O.* 1889, p. 259, 1890, p. 193; *Steen, Vög. Schlesw.-Holst.* p. 82 (1891); *Lydekker, Ibis*, 1891, p. 393.

Perdix cinerea, vars. B & C, *Temm. Pig. et Gall.* iii. pp. 399, 400, 730, 731 (1815).

Perdix cineracea, *Brehm, Handb. Vög. Deutschl.* p. 525 (1831).

Starna cinerea, *Bonap. Comp. List B.* p. 43 (1838); *Keys. u. Blas. Wirbelt. Europa's*, p. 202 (1840); *Gray, Gen. B.* p. 61 (1840); *Jaubert et Lapomm. Rich. Orn.* p. 421 (1859) [France]; *Linderm. Vög. Griechenl.* p. 125 (1860); *Filippi, Viag. Pers.* i. p. 351 (1865); *Degl. et Gerbe, Orn. Europ.* ii. p. 73 (1867); *Severtz. J. f. O.* 1875, p. 181 [Turkestan]; *Boyd. B. Caucas.* p. 138 (1879); *Brandt, J. f. O.* 1880, p. 241 [St. Petersburg]; *Boyd. Consp. Av. Imp. Ross.* fasc. i. p. 40 (1884); *Radde, Orn. Caucas.* p. 352 (1884); *De la Torre u. Tschusi, Ornis*, 1885, p. 493 [Hungary]; *Radde, J. f. O.* 1885, p. 79; *Cab. J. f. O.* 1885, p. 315, 1886, p. 349, 1887, p. 568, 1888, p. 528 [Germany]; *Lütken, Ornis*, 1886, p. 80 [Denmark]; *Lorenz, Beitr. Orn. Kaukas.* p. 55 (1887); *Tschusi & De la Torre, Ornis*, 1887, p. 281, 1888, p. 249, *Suppl.* p. 260, 1890, p. 138 [Hungary]; *Meyer & Helm, Zeit. ges. Orn.* iv. p. 372 (1888) [Germany]; *Winge, Ornis*, 1888, p. 402, & 1890, p. 367 [Denmark]; *Leverk. J. f. O.* 1889, p. 132; *Dubois, Ornis*, 1890, p. 327 [Belgium].

Perdix (Starna) cinerea, *Middend. Sibir. Reise*, ii. pt. ii. p. 209 (1855–75) [Barabinska Steppe].

Perdix sylvestris, *Brehm, Vogelfang*, p. 267 (1855).

Starna perdix, *Fitzinger, Atl. Nat. Vög.* fig. 237 (1864); *Bettoni, Uec. Lombard.* ii. pl. 8 (1867); *Fritsch, Nat. Vög. Europa*, p. 293 (1870), pl. xxx. fig. 9 (1871); *id. J. f. O.* 1871, p. 379 [Bohemia]; *Gigl. Avif. Ital.* p. 341 (1886); *id. Avif. Ital.* i. p. 525 (1889), ii. p. 661 (1890), iii. p. 516 (1891).

Starna palustris, *Demezz. Ibis*, 1864, p. 225.

Cothurnix cinerea, *Lemett. Cat. Ois. Seine-Inf.* p. 118 (1874).

Perdix (Starna) robusta, *Homeyer & Tancré, Mitth. orn. Ver. Wien*, vii. p. 92 (1883) [Altai]; *Reich. & Schal. J. f. O.* 1885, p. 456.

Perdix robusta, *Homeyer & Tancré, Mitth. orn. Ver. Wien*, ix. pl. figs. 3–5 (1885).

Perdrix cendrée, p. 26, P. blanche *et* P. noire, p. 27, *Olphe-Galliard, Faun. Orn. Europe Occ.* fasc. xxxix. (1886).

Perdix pallida, *Demezz. in Olphe-Galliard, Faun. Orn. Europe Occ.* fasc. xxxix. p. 35 (1886).

Perdix perdix, *Hartert, Kat. Mus. Senckenb.* p. 194 (1891); *Grant*, '*Field*,' 21st Nov., 1891, & 9th April, 1892; *id. Ann. Mag. N. H.* (6) xii. p. 62 (1893) [Sexual differences in the plumage].

Perdix hispaniensis, *Reichenow, Ber. Ally. Deutsch. orn. Ges.* 17th March, 1893, p. 5 [Corunna].

Adult male. Top of the head and nape brown. Most of the feathers with a narrow rufous-buff shaft-stripe somewhat dilated

and tipped with black at the extremity; back and sides of the neck brownish grey, shading into brownish buff on the back, rump, and upper tail-coverts, and closely marked with narrow wavy black cross-bars and lines; the feathers of the back usually with ill-defined subterminal chestnut cross-bars, which become strong and well-marked on the rump and upper tail-coverts. Outer secondaries, scapulars, lesser, median, and secondary coverts brownish buff, paler towards the extremities, thickly vermiculated with black, with a chestnut blotch on either web, and well-defined pale buff shaft-stripes. Primaries, primary-coverts, and rest of secondaries dark brown, with rather wide-set buff cross-bars on both webs, though in the latter they are less regular and more broken. Forehead, lores, superciliary stripes, cheeks, chin, throat, and front of neck dull rufous; ear-coverts rather browner. Chest and breast pale grey, finely vermiculated with black lines; below a wide horseshoe-shaped dark chestnut patch edged above with pale rufous or white. Belly and thighs whitish, vermiculated with black on the upper parts. Under tail-coverts dirty buff, vermiculated with black. Sides and flanks the same, with narrow buff shaft-stripes and wide subterminal chestnut cross-bars. Centre pair of tail-feathers closely mottled with rufous buff and black, somewhat paler towards the margins, second pair the same, but more rufous towards the shaft, remainder of the feathers chestnut tipped with buff. Iris dark brown. Bill blackish brown. Legs and feet bluish grey. Total length 12·6 inches, wing 6·2, tail 3·5, tarsus 1·7.

The *young male* after the first moult resembles the adult, but the general colouring of the plumage is perhaps not quite so rich. The legs and feet yellowish brown, and the first primary is pointed instead of round.

Adult female. Differs from the male in the following points:— The sides of the neck are brownish, each feather with a narrow buff shaft, somewhat dilated towards the extremity; the lesser and median wing-coverts and the scapulars have the ground-colour of the feathers mostly black with wide-set transverse buff bars; and the horseshoe mark on the breast is reduced to a few chestnut spots on either side, or sometimes entirely absent. (In a *barren female* there is a very large horseshoe mark; and the wing-coverts have one web of each feather like that of the male, and the other with normal buff bars.) Total length 12·3 inches, wing 6, tail 3·2, tarsus 1·65.

The *young female* after the first moult resembles the adult, but the horseshoe mark on the lower breast is large and well-marked in the great majority of specimens, and it is the exception to find young birds in which it is rudimentary or absent. Legs and feet yellowish brown.

In *quite young birds* the whole of the upper parts and the chest and breast are brownish buff, and each feather of the mantle, chest, and breast has a buff or whitish black-edged shaft-stripe. The adult plumage first makes its appearance on the sides of the chest and breast, and on the sides, flanks, rump, and upper tail-coverts;

while at the same time the whole tail, the inner primary and secondary quills, and the lesser and median wing-coverts are renewed. Legs and feet yellowish brown.

Hab. Europe and Western and Central Asia: ranging westwards to Norway and the British Isles; eastwards to the Barabinska Steppe and Altai Mountains; southwards to the valley of the Douro, Naples, the Caucasus, Asia Minor, and North Persia.

a, b. ♂ imm. sk.	Cromarty, Scotland, Jan.	G. St. Quintin, Esq. [P.].
c. ♂ imm. sk.	Aboyne, Aberdeen, Sept.	Dr. R. B. Sharpe [P.].
d–g. ♂ ♀ ad. et imm. sk.	Banffshire, Oct.	W. R. Ogilvie Grant, Esq. [P.].
h, i. ♂ ♀ imm. sk.	Morayshire, Dec.	W. R. Ogilvie Grant, Esq. [P.].
k–n. ♂ ♀ ad. et imm. sk. et st.	Southern Slope of the Grampians, 15,000 ft., Dec. (*J. Fowler*).	Gould Coll.
o, p. ♂ ♀ imm. sk.	Argyllshire, Dec.	F. M. Ogilvie, Esq. [P.].
q, r. ♂ imm. et juv. sk.	Dumblane, Stirlingshire, Oct., Nov.	W. R. Ogilvie Grant, Esq. [P.].
s. ♀ imm. sk.	England.	Hume Coll.
t, u. ♀ imm. sk.	England, Nov. (*Leadenhall Market*).	Purchased.
v. ♂ imm. sk.	Preston Hall, Dec. (*E. J. Betts*).	Gould Coll.
w. Ad. st.	Wallington, Northumberland.	Sir W. Trevelyan, Bart. [P.].
x–e′. ♂ ♀ ad. imm. et juv. sk.	Lincolnshire, Sept., Oct.	J. H. Caton Haigh, Esq. [P.].
f′, g′. ♀ ad. et imm. sk.	Norfolk, Nov.	Lord Esmé Gordon [P.].
h′–k′. ♀ imm. sk.	Norfolk, Nov.	W. R. Ogilvie Grant, Esq. [P.].
l′–n′. ♂ ♀ imm. sk.	Leiston, Suffolk, Nov., Jan.	F. M. Ogilvie, Esq. [P.].
o′–q′. ♂ ♀ imm. sk.	Ipswich, Suffolk, Oct., Nov.	J. D. Cobbold, Esq. [P.].
r′, s′. ♂ ♀ ad. sk.	Bury St. Edmunds, Suffolk, Oct.	Rev. B. P. Oakes [P.].
t′–d″. ♂ ♀ ad. et juv. sk. et st.	Cambridgeshire.	J. Baker, Esq. [P.].
e″. ♂ imm. sk.	Swavesey, Cambridgeshire (*P. Godman*).	Salvin-Godman Coll.
f″–i″. ♀ ad. et imm. sk.	Northamptonshire, Oct.	Lord Lilford [P.].
k″. ♂ imm. sk.	Bedfordshire, Oct.	W. R. Ogilvie Grant, Esq. [P.].
l″. ♀ imm. sk.	Witney, Oxfordshire, Nov.	S. A. Vane, Esq. [P.].
m″. ♂ imm. sk.	Highgate, Middlesex, March (*J. Davy*).	Tweeddale Coll.
n″. ♂ ad. sk.	Cookham, Berkshire.	Tweeddale Coll.
o″. ♂ imm. [var.] sk.	Kent.	J. Planta, Esq. [P.].
p″. ♀ ad. sk.	Ashdown, Sussex, Oct. (*Earl of Craven*).	Gould Coll.

q''. ♀ ad. [var.] sk.	Petersfield, Sussex.	ViscountWolmer[P.].
r''. ♀ imm. sk.	Hampshire.	Gould Coll.
s'', t''. ♀ ad. et ♂ imm. sk.	New Forest, Hampshire, Dec., March.	Gould Coll.
u''. ♂ imm. [var.] sk.	Barnstaple, Devonshire (*W. J. Hose*).	Gould Coll.
v''–x''. Ad. et imm. st.	France.	Dr. R. B. Sharpe [P.] & Riocour Coll.
y''–b^3. Ad. [var.] st.	France.	Riocour Coll.
c^3, d^3. ♂ imm. et ♀ ad. sk.	Montrésor, France.	Dr. Stolzmann [P.].
e^3,f^3. ♂ imm. et ♀ ad. sk.	Near Haarlem, Holland.	M. F. E. Blaauw [P.].
g^3. ♂ imm. sk.	Sweden (*H. Wheelwright*).	Gould Coll.
h^3–l^3. ♀ ad. et imm. sk.	Helsingfors, Finland.	Dr. F. W. Forssell [C.].
m^3. ♂ imm. [var.] sk.	Russia.	Verreaux Coll.
n^3–t^3. ♂ ♀ ad. et imm. sk.	Russia, Nov. (*Leadenhall Market*).	Purchased.
u^3–x^3. ♂ ad. et imm. sk.	Poland, Jan.	Dr. J. Stolzmann [E.].
y^3–a^4. ♂ ad. et ♀ imm. sk.	Mark Bradenburg, Sept., Oct.	Dr. A. Reichenow [E.].
b^4, c^4. ♂ ad. et ♀ imm. sk.	Holstein, Oct., Nov.	Dr. A. Reichenow [E.].
d^4. ♀ ad. sk.	Austria, Nov. (*Leadenhall Market*).	Purchased.
e^4–i^4. ♂ ♀ ad. et imm. sk.	Hungary, Dec.	E. Chernel de Chernelhaza [P.].
k^4. ♀ ad. sk.	West side of the Gulf of Salonika (*Spencer*).	Gould Coll.
l^4–n^4. ♂ ad., ♀ imm. sk., ad. st.	Thessaly (*Lord J. Browne*).	Gould Coll.
o^4. ♀ ad. sk.	Angora, Asia Minor, April.	C. G. Danford, Esq. [C.].

p^4. Skeleton.
q^4–v^4. Skulls and sterna.

The following refers to the curious rufous variety known as *Perdix montana*, of which the synonymy is added in the footnote * :—

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* Perdix montana, *Briss. Orn.* i. p. 224, pl. xxi. fig. 2 (1760); *Lath. Ind. Orn.* ii. p. 646 (1790); *Bechst. Nat. Deutschl.* iii. p. 554 (1793); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 226 (1817); *Steph. in Shaw's Gen. Zool.* xi. p. 344 (1819); *Vicill. Tabl. Encycl. Méth.* i. p. 210, pl. 94. fig. 1 (1823); *Vicill. Faun. Franç.* p. 250, pl. 108. fig. 2 (1828); *Naum. Nat. Vog. Deutschl.* vi. p. 482 (1833); *Jaubert & Lapomm. Rich. Orn.* p. 421 (1859).

La Perdrix de Montagne, *Buff. Hist. Nat. Ois.* ii. p. 419 (1771); *D'Aubent. Pl. Enl.* ii. pl. 42. no. 136; *Olphe-Galliard, Faun. Orn. Europe Occ.* fasc. xxxix. p. 26 (1886); *Alléon, Ornis*, 1886, p. 416 [Kustendji, Rumania].

Tetrao montana, *Gm. S. N.* i. pt. ii. p. 758 (1788).

Perdix torquata *et* P. varia, *Bechst. Nat. Deutschl.* iii. p. 553 (1793).

In the most extreme form of this variety the whole head and neck are dull rust-red, and the rest of the plumage dark chestnut, except the thighs and lower part of the belly and vent, which are white, the primaries, which are brown, the secondaries and longer scapulars, which are irregularly margined with whitish or buff, finely vermiculated with black, and the wing-coverts and scapulars, which have irregular whitish shaft-stripes dilated at the extremity of the secondary coverts into a whitish patch dotted with black.

In a second specimen the plumage is as above, but the primaries are mottled, especially on the outer web, with rufous white, and most of the lesser and median coverts have a small white patch at the extremity.

Two other specimens combine all the characters of the above, but all the feathers of the back, wing-coverts, scapulars, outer secondaries, and flanks are tipped with white, mottled with black.

A fifth resembles these two last specimens, but also approaches the typical *P. perdix* in the plumage of the top and back of the head, the back and sides of the neck, and the mantle (but these parts are greyer than usual), and of the lower back, rump, and upper tail-coverts (though the ground-colour is dirty white instead of brownish buff). On the underparts the chestnut horseshoe mark is enormously developed, while the flanks and sides are almost normal. The tail is unlike that of any other, having the basal portion of the outer web white, slightly mottled with black.

On the whole, this bird, with the exception of its tail, is exactly intermediate between a typical specimen of the variety *P. montana* and *P. perdix*, though the parts of the plumage which resemble the latter are paler than usual.

P. montana is said to be confined to the mountains of Lorraine, but I have seen specimens of this variety, which are still preserved in private collections, that were shot some years ago in Northumberland, and are in every way identical with birds from Lorraine. Several examples are also preserved in the Newcastle Museum. There can be no doubt that it is merely a strongly-marked variety of *P. perdix*, and not a distinct species; and I think anyone who takes the trouble to examine the five specimens which I have described above, and sees the gradual transition they display between typical *P. perdix* and typical *P. montana*, can only arrive at the same conclusion.

a. Ad. sk.	France.	Riocour Coll.
b, *c*. Ad. sk.	France.	Riocour Coll.
d. Ad. sk.	Zogny, Jan.	Riocour Coll.
e. Ad. st.	Mountains of Lorraine.	Dr. R. B. Sharpe [P.].

Perdix cinerea, var. A, *Temm. Pig. et Gall.* iii. pp. 398, 730 (1815).
Mountain Partridge, *Lath. Gen. Hist.* viii. p. 288 (1823).
Cheshire Partridge, *Lath. Gen. Hist.* viii. p. 286 (1823).
Perdix cinerea, var. montana, *Jard. Nat. Lib., Orn.* iv. p. 101, pl. ii. (1834).

Subsp. *a*. Perdix damascena.

Perdix damascena, *Briss. Orn.* i. p. 223 (1760); *Lath. Ind. Orn.* ii. p. 646 (1790); *Bonn. Tabl. Encycl. Méth.* i. p. 210 (1791); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 223 (1817); *Jaubert & Lapomm. Rich. Orn.* p. 421 (1859) [France]; *Fontaine, Faun. Luxemb., Ois.* p. 177 (1865); *Olphe-Galliard, Faun. Orn. Europe Occ.* fasc. xxxix. p. 35 (1886).

La petite Perdrix grise, *Buff. Hist. Nat. Ois.* ii. p. 417 (1771).

Tetrao damascenus, *Gm. S. N.* i. pt. ii. p. 758 (1788).

Perdix cinerea, var. D, *Temm. Pig. et Gall.* iii. pp. 392, 731 (1815).

Damascus Partridge, *Lath. Gen. Hist.* viii. p. 287 (1823).

Perdix damascenus, *Vieill. Faun. Franç.* p. 250 (1828).

Perdix cinerea, *Malherbe, Faun. Orn. Sicil.* p. 154 (1843).

Perdix minor, *Brehm, Vogelfang*, p. 267 (1855).

Starna cinerea, var. damascena, *Schn. Ornis*, 1887, p. 537 [Alsace]; *Dubois, Ornis*, 1890, p. 327 [Belgium].

Starna cinerea, var. peregriana, *Tschusi u. De la Torre, Ornis*, 1888, p. 250 [Silesia].

This is a smaller migratory race of *P. perdix*, perfectly similar in plumage, and differing only in its somewhat smaller size, and in having yellow legs and feet and apparently also a yellow bill in the adult. Total length 9 inches, wing 5·9, tail 3·1, tarsus 1·4.

Hab. Apparently an Alpine form, descending to the plains during the cold season, when it is met with in very large flocks, which are reported not to associate with the Common Partridge (*P. perdix*).

a, b. Ad. et imm. sk.	France.	Riocour Coll.
c. Ad. sk. [var.].	France.	Riocour Coll.

2. Perdix daurica.

Tetrao perdix, var dauurica, *Pall. Zoogr. Ross.-As.* ii. p. 78 (1811) [Dauria].

Perdix sibirica, *Pall. Zoogr. Ross.-As.* ii. p. 80 (1811); *Gould, B. Asia*, vi. text to pl. 73 (1871).

Perdix cinerea, var. daurica, *Schrenck, Reis. Amur-L.* i. p. 521 (1859).

Perdix cinerea, *Lamprey, P. Z. S.* 1862, p. 221 [Tien-Tsin Market]; *Homeyer, J. f. O.* 1870, p. 174.

Perdix (Starna) cinerea, var. rupestris davurica, *Radde, Reise Ost-Sib.* ii. p. 304, pl. xii. (1863).

Perdix barbata, *Verr. & Desm. P. Z. S.* 1863, p. 62, pl. ix. [Dauria]; *Swinh. P. Z. S.* 1863, p. 307; *Verr. P. Z. S.* 1863, p. 371; *Gray, List Gallinæ Brit. Mus.* p. 56 (1867); *Dybowski, J. f. O.* 1868, p. 337 [Dauria]; *Gray, Hand-l. B.* ii. p. 267 (1870); *David, N. Arch. Mus. Bull.* vii. p. 11 (1871); *Gould, B. Asia*, vi. pl. 73 (1871); *Swinh. P. Z. S.* 1871, p. 400; *Tacz. J. f. O.* 1873, p. 99; *Heugl. J. f. O.* 1874, p. 399; *Dresser, Ibis*, 1876, p. 323; *Tacz. Bull. Soc. Zool. Fr.* i. p. 243 (1876) [Lake Baikal]; *Prjev. Mongolia*, ii. p. 123 (1876); *id. Rowley's Orn. Misc.* ii. p. 422 (1877) [Kiachta and Dolon-nor to Sources of Yangtze-Kiang]; *David & Oustal. Ois. Chine*, p. 392 (1877); *Severtz. Ibis*, 1883, p. 80; *Pleske, Bull. Acad. St. Pétersb.* xiii. p. 297 (1892) [Tian-shan, Prov. of Guchen, Chami and Dzungaria].

Perdix daurica, *David, N. Arch. Mus. Bull.* iii. p. 38 (1867) [Mongolia and Mts. near Pekin]; *Severtz. Turkest. Jevotnie*, p. 68 (1873); *id. J. f. O.* 1875, p. 181 [Turkestan]; *Pleske, Mém. Ac. St. Pétersb.* (7) xxxvi. no. 3, p. 47 (1888).

Starna daurica, *Bogd. Consp. Av. Imp. Ross.* fasc. i. p. 41 (1884) [Dauria, Dzungaria, Kuldja, Tian-shan].

Adult male. The general colour above resembles that of *P. perdix*, but is paler, and the colour of the back and sides of the neck and upper back is greyer, while the subterminal chestnut cross-bars on the back are darker and as strongly defined as on the rump and upper tail-coverts. A narrow black band across the front of the forehead between the nostrils; ear-coverts brown, tipped with whitish; below the eye a whitish patch narrowly edged beneath with black; forehead, lores, wide superciliary stripes, and the fore part of the cheeks rufous buff: feathers on the sides of the chin and throat similar in colour but considerably elongated, and with dark shafts; middle of chin and throat paler; hind part of the cheeks and sides of the neck grey; sides of the chest and breast grey, finely vermiculated with black, middle bright buff, followed by a large black horseshoe-shaped patch; belly, thighs, and under tail-coverts whitish; sides and flanks dirty white, each with a subterminal chestnut cross-bar. Two middle pairs of tail-feathers and the terminal part of the third pair whitish, with wavy bars and vermiculations of black; remainder of the feathers chestnut, more or less tipped with white, and with an ill-defined darker chestnut subterminal band. Total length 11·5 inches, wing 6, tail 3·5, tarsus 1·5.

A *young male* has the sides and back of the neck and mantle brownish white, with spots and shaft-stripes of whitish; the upper parts are more coarsely marked than in the adult, and the black horseshoe mark much reduced.

Adult female. Appears to differ from the male in having the black horseshoe much reduced or absent, and there is much less bright buff on the chest and breast; there is also a chestnut patch on the cheek below the eye. Total length 11 inches, wing 5·6, tail 3, tarsus 1·4.

Hab. North-eastern and Central Asia, ranging north to Dauria, eastwards to Amoorland, Mantchuria, and the mountains near Pekin, westwards to Dzungaria and the Tian-shan Mountains, and southwards to the sources of the Yangtze-kiang.

a–d. ♂ ♀ ad. sk. et st.	Dauria.	Gould Coll.
e. ♂ imm. sk.	South Mantchuria.	H. M. James, Esq. [P.].
f. Juv. sk.	Kansu (*Grum-Grzimailo*).	St. Petersburg Museum [E.].

3. Perdix hodgsoniæ.

Sacfa hodgsoniæ, *Hodgson, J. As. Soc. Beng.* xxv. p. 165, pl. (1857) [Tsang, Thibet].

Perdix hodgsoniæ, *Gould, B. Asia*, vi. pl. 74 (1857); *Adams, P. Z. S.* 1859, p. 185 [Nobra, N. of Ladak]; *Leadb. P. Z. S.* 1861, p. 198

[Hanlee, Thibet]; *Gray, List Gallinæ Brit. Mus.* p. 57 (1867); *Hume, Nests & E. Ind. B.* p. 544 (1873); *Cock & Marsh. Str. F.* i. p. 349 (1873); *Hume, Str. F.* vii. p. 432 (1878); *Hume & Marsh. Game B. Ind.* ii. p. 65, pl. (1879); *Oates, ed. Hume's Nests & E. Ind. B.* iii. p. 438 (1890) [Oong Lung La Pass, between Indus and Pangong Valleys].

Perdix hodgsonii, *Adams, P. Z. S.* 1858, p. 503 [N. of Mussooree]; *Jerd. B. Ind.* iii. p. 575 (1863).

Perdix (Sacfa) hodgsoniæ, *Gray, Hand-l. B.* ii. p. 267 (1870).

Adult male and female. A narrow black band across the front of the forehead between the nostrils, followed by a wider white band edged with black; crown and sides of the head chestnut; rest of the back of the head and nape a mixture of black and rufous buff, with a triangular whitish spot at the extremity of each feather; back and sides of the neck with a wide rufous-chestnut collar fringed in freshly-moulted specimens with whitish; mantle grey, shading into brownish grey on the lower back, rump, and shorter upper tail-coverts; all are barred transversely with black, and the feathers have usually a bar or two of buff more or less mixed with chestnut near the extremity; the wings, scapulars, and coverts resemble those of *P. perdix*, but the markings are brighter and more strongly defined, and the inner webs of the longer scapulars and outer secondaries are rich golden buff; the lores and fore part of the cheeks white, margined with black and separated from the bill by a narrow black line of feathers. A white patch of feathers beneath the eye edged below with black. Ear-coverts black, with pale shafts and chestnut bases. A large black patch on the hinder part of the cheek and side of the throat. Chin, middle of the throat, and a band round the fore part of the neck white, the latter bounded below by a narrow black band; feathers on the sides of the chin and throat elongate, with black shafts, but less developed than in *P. dauurica*. Chest, breast, and belly white with a subterminal black bar, except a large patch of feathers in the middle of the breast, which are black, widely margined with white (this patch is almost hidden in freshly-moulted birds, but is strongly marked in worn specimens). Sides and flanks rufous buff, with a wide subterminal chestnut band and a whitish patch and black wavy lines at the extremity of each feather. Rest of the underparts whitish or buff, with irregular wavy black lines and marks. Tail and longer tail-coverts as in *P. dauurica*, but the subterminal bars on the latter are usually black instead of chestnut. Naked skin round the eye and on the cheek red. Bill and legs horn-green.

Male. Total length 11·5 inches, wing 6·2, tail 3·6, tarsus 1·7.

Female. Total length 11 inches, wing 6·1, tail 3·6, tarsus 1·65.

In a *younger specimen* the crown and back of the head are blackish, with buff shaft-stripes; the back and sides of the neck and the mantle are brownish buff, marked and barred with black, and with whitish-buff shaft-stripes edged with black. The chestnut collar and the black patches on the hinder parts of the cheeks are just beginning to appear; otherwise the plumage is nearly similar to that of the adult.

A *quite young bird* differs principally from the young of *P. perdix* in having the black cheek-marks indicated by brownish-black patches.

Hab. Southern Thibet, just extending into India, in Cashmere, Gurhwal, and Kumaon; also Native Sikhim and Darjeeling.

a, b. Ad. sk.	Ladak.	Hume Coll.
c. Ad. st.	Nobra, N. of Ladak.	Capt. Smith [C.].
d–m. Ad., imm., et juv. sk.	Thibet, Sept. to Dec. (*L. Mandelli*).	Hume Coll.
n. Ad. sk.	Tsang, Thibet.	B. H. Hodgson, Esq. [P.]. (Type of the species.)
o, p. ♀ ad. sk.	Interior of Native Sikhim, May (*L. Mandelli*).	Hume Coll.
q. ♂ ad. sk.	Darjeeling.	Hume Coll.

4. Perdix sifanica.

Perdix sifanica, *Prjevalsky, Mongolia*, ii. p. 124 (1876); *id. Rowley's Orn. Misc.* ii. p. 423 (1877) [Mts. of Kansu]; *Dedit. J.f. O.* 1886, pp. 528, 535, 536, 540 [Nan-shan Mts.]; *Pleske, Bull. Acad. St. Pétersb.* xiii. p. 297 (1892) [North Nan-shan and Si-ning Mts.].

Adult male and female. Differ from *P. hodgsoniæ* in having no black patch on the middle of the lower breast, all the feathers of the chest, breast, and belly being whitish, with a subterminal black bar; the black patch on the hinder part of the cheek and side of the throat much reduced; and the subterminal bars on the feathers of the lower part of the mantle chestnut instead of black, as is the case in almost all specimens of *P. hodgsoniæ*. Hodgson's type specimen is the only example of the fifteen specimens before me in which these are chestnut and resemble the present species, though one bird from Ladak is somewhat intermediate. This species is also somewhat smaller.

Male. Total length 10·5 inches, wing 5·9, tail 3·2, tarsus 1·6.

Female. Total length 10·5 inches, wing 5·55, tail 3, tarsus 1·55.

Hab. Northern Thibet, Kansu, Nan-shan and Si-ning Mountains.

a, b. ♂ ♀ ad. sk.	Kansu, April, Oct.	M. Berezowsky [C.].
c, d. ♂ ♀ ad. sk.	Kansu, April, June (*Grum-Grzimailo*).	St. Petersburg Mus. [E.].

10. MARGAROPERDIX.

Type.

Margaroperdix, *Reichenb. Nat. Syst. Vögel*, p. xxviii (1852) ..... M. madagascariensis.

Tail with 12 feathers, wedge-shaped, the centre pair of feathers considerably longer than the next pair and about half the length of the wing.

1st primary falls between the 6th and 7th, and is not much shorter than the longest.

Tarsus without a spur, and shorter than the middle toe and claw. Claws moderate, somewhat curved.

Range. Madagascar; Réunion (introduced).

1. Margaroperdix madagascariensis.

La Grande Caille de Madagascar, *Sonn. Voy. Ind. Orient.* ii. p. 169, pl. 98 (1782).

La Caille brune de Madagascar, *Sonn. Voy. Ind. Orient.* ii. p. 171 (1782).

Madagascar Quail, *Lath. Gen. Syn.* ii. pt. ii. p. 788 (1783); *id. Gen. Hist.* viii. p. 310 (1823).

Grey-throated Quail, *Lath. Gen. Syn.* ii. pt. ii. p. 788 (1783); *id. Gen. Hist.* viii. p. 300 (1823).

Tetrao madagascariensis, *Scop. Del. Flor. et Faun. Insubr.* pt. ii. p. 93 (1786).

Tetrao striatus, *Gmel. S. N.* i. pt. ii. p. 763 (1788).

Tetrao griseus, *Gmel. S. N.* i. pt. ii. p. 764 (1788).

Perdix striata, *Lath. Ind. Orn.* ii. p. 654 (1790); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 261 (1817); *Temm. Pl. Col.* v. pl. 39 [no. 82] (1823); *Schl. P. Z. S.* 1866, p. 425 [Réunion, introduced]; *Schl. in Poll. & Van Dam. Rech. Madasc.* pt. ii. p. 120 (1868).

Perdix grisea, *Lath. Ind. Orn.* ii. p. 654 (1790); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 259 (1817).

Coturnix striata, *Bonn. Tabl. Encycl. Méth.* i. p. 221, pl. 97. fig. 2 (1791).

Coturnix grisea, *Temm. Pig. et Gall.* iii. pp. 523, 744 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 370 (1819).

Coturnix perlata, *Temm. Pig. et Gall.* iii. pp. 470, 739 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 368 (1819).

Coturnix griseus, *Gray, Gen. B.* iii. p. 507 (1846).

Coturnix strictus, *Cuv., Heugl. Vög. N.O.-Afr.* p. 51, no. 534 (1856).

Margaroperdix striata, *Hartl. Orn. Madagas.* p. 69 (1861); *Maillard, Notes Réunion*, p. 163 (1862); *Roch & Newton, Ibis*, 1863, p. 168; *Newton, Ibis*, 1863, p. 454; *Sclat. P. Z. S.* 1863, p. 164; *Newton, P. Z. S.* 1865, p. 836; *Grandidier, Hist. Madagas., Ois.* i. p. 487, pls. 199–201 A (1885); *Sibree, Ibis*, 1891, p. 565.

Perdix madagascariensis, *Gray, List Gallinæ Brit. Mus.* p. 57 (1867).

Perdix (Margaroperdix) madagascariensis, *Gray, Hand-l. B.* ii. p. 267 (1870).

Margaroperdix madagascariensis, *Hartert, Kat. Mus. Senckenb.* p. 195 (1891).

Adult male. Top of the head reddish brown, a line of black feathers down the centre with buff shaft-stripes; back of the neck and mantle dull reddish brown, with whitish shaft-stripes widely edged on either side with black. Scapulars, inner median and secondary coverts, and outer secondaries the same, but with the terminal half of most of the feathers barred on the inner or both webs with rufous buff edged with black. Lesser and outer median wing-coverts chestnut (sometimes margined with grey and with grey shaft-stripes). Lower back, rump, and upper tail-coverts black mixed with reddish brown and tipped with olive-brown, each feather with a longitudinal white shaft-stripe and transverse bars of rufous or buff on both webs. Primaries, primary-coverts, and secondaries blackish brown, more or less mottled and edged with pale rufous on the outer web. The superciliary stripes, which are continued down the sides of the neck, and two stripes which commence at the gape and bound the sides of the throat pure white;

otherwise the rest of the head, chin, and throat are black. Sides of the neck, chest, and breast grey; front of the neck and middle of the chest chestnut; middle of the breast and belly black, each feather with a large round or oval white spot near the extremity. Sides and flanks chestnut, with white black-edged shaft-stripes. Tail black, with reddish-white cross-bars. Iris brown. Legs and feet greyish black. Bill black, bluish towards the base. Total length 10 inches, wing 5·1, tail 2·7, tarsus 1·3.

Adult female. Top of the head black fringed with olive-brown, a line of feathers with buff shaft-stripes running down the centre of the head; the whole of the upper parts black tipped with warm olive-brown, and each feather with a whitish or buff shaft-stripe and transversely barred on both webs with rufous buff. Quills like those of the male. Chin and throat buff; ear-coverts brown; rest of the head rufous buff dotted with black. Rest of the underparts buff or rufous buff; the feathers of the neck, chest, breast, belly, and under tail-coverts each with two black lines, parallel with one another and with the margin of the feather; sides and flanks barred with black. Tail black, with buff cross-bars. Total length 9·6 inches, wing 5·1, tail 2·7, tarsus 1·3.

Hab. Same as that of the genus.

a–c. ♂ ♀ ad. sk.	Madagascar.	Purchased.
d–f. ♂ ♀ ad. sk.	Madagascar, March (*W. D. Cowan*).	Tweeddale Coll.
g, h. ♂ ♀ ad. sk.	Madagascar (*Bewsher*).	Shelley Coll.
i, k. ♂ ♀ ad. sk.	Central Madagascar.	Shelley Coll.
l. ♀ ad. sk.	Central Madagascar.	Seebohm Coll.

11. PERDICULA.

	Type.
Perdicula, *Hodgs. Beng. Sport. Mag.* ix. p. 344 (1837) ..	P. asiatica.

Tail with 12 feathers; rather feeble, but much stiffer than the upper tail-coverts and less than half the length of the wing.

1st primary intermediate in length between the 7th and 9th; 4th slightly longest.

Tarsus equal to the middle toe and claw; a pair of blunt spurs in the male.

Axillaries short.

Range. Peninsula of India and Ceylon.

Key to the Species.

A. Chest and breast barred with black and white. (*Males.*)
  a. Throat rufous chestnut: inner webs of primaries not barred with rufous buff ..... *asiatica*, p. 198.
  b. Throat dull brick-red; inner webs of primaries barred with rufous buff ..... *argoondah*, p. 200.
B. Chest and breast not barred with black and white. (*Females.*)
  c. Throat rufous chestnut ..... *asiatica*, p. 198.
  d. Throat white tinged with vinaceous ..... *argoondah*, p. 200.

1. Perdicula asiatica.

Perdix asiatica, *Lath. Ind. Orn.* ii. p. 649 (1790).
Asiatic Partridge, *Lath. Gen. Syn. Suppl.* ii. p. 278 (1802); *id. Gen. Hist.* viii. p. 281 (1823).
Lauwan Partridge, *Lath. Gen. Hist.* viii. p. 304 (1823) [♀].
Perdix cambayensis, *Temm. Pl. Col.* v. pl. 41 [no. 447] (1828); *Franklin, P. Z. S.* 1831, p. 123.
Coturnix pentah, *Sykes, P. Z. S.* 1832, p. 153 [Deccan]; *Gray, Ill. Ind. Zool.* ii. pl. 45. fig. 3 (1834); *Sykes, Trans. Zool. Soc.* ii. p. 19, pl. iii. (1841); *Gray, List of B.* pt. iii. *Gall.* p. 39 (1844); *Adams, P. Z. S.* 1859, p. 186 [Cashmere].
Perdicula rubicola, *Hodgs. Beng. Sport. Mag.* ix. p. 344 (1837).
Coturnix cambaiensis, *Gray, List of B.* pt. iii. p. 38 (1844); *id. Cat. Hodgs.* ed. i. p. 128 (1846); *id. Gen. B.* iii. p. 507 (1846).
Perdicula rubicolor, *Hodgs. Gray's Zool. Misc.* p. 85 (1844); *id. Icon. ined. in Brit. Mus.* nos. 763–764.
Coturnix rubiginosa, *Gray, Gen. B.* iii. p. 507 (1846).
Perdicula asiatica, *Adams, P. Z. S.* 1858, p. 504 [Lower ranges of W. Himalayas]; *Irby, Ibis*, 1861, p. 236 [Oudh and Kumaon]; *Gould, B. Asia*, vii. pl. 4 (1863); *Holdsw. P. Z. S.* 1872, p. 470 [Ceylon, S. India]; *Hume, Nests & E. Ind. B.* p. 546 (1873); *Lloyd, Ibis*, 1873, p. 415 [Kattiawar]; *Hume, Str. F.* vii. p. 158 (1878) [Distribution]; *Davidson & Wenden, Str. F.* vii. p. 87 (1878) [Hills at Satara and Nulwar, W. Deccan]; *Ball, Str. F.* vii. p. 225 (1878) [Ganges to Godaveri]; *Hume & Marsh. Game B. Ind.* ii. p. 109, pl. (1879); *Butler, Cat. B. Sind etc.* p. 55 (1879); *id. Cat. B. S. Bombay*, p. 69 (1880); *Vidal, Str. F.* ix. p. 77 (1880) [S. Konkan]; *Legge, B. Ceylon*, iii. p. 752 (1880); *Butler, Str. F.* ix. p. 422 (1880) [Bombay]; *Reid, Str. F.* x. p. 63 (1881) [Lucknow]; *Davidson, Str. F.* x. p. 317 (1882) [W. Khandeish]; *Davison, Str. F.* x. p. 411 (1883) [Mysore and Nilghiris]; *Swinh. & Barn. Ibis*, 1885, p. 131 [Central India]; *Taylour, Str. F.* x. p. 465 (1887) [Manzeerabad, Mysore]; *Oates, ed. Hume's Nests & E. Ind. B.* iii. p. 440 (1890).
Perdicula cambayensis, *Jerd. B. Ind.* iii. p. 581 (1863); *Ball, Str. F.* ii. p. 427 (1874) [Chota Nagpur]; *Butler, Str. F.* iv. p. 6 (1876) [Mt. Aboo]; *Fairb. Str. F.* iv. p. 262 (1876) [Khandala, Mahabaleshwar, &c.].
Perdicula argoondah, *Gould* (*nec Sykes*), *B. Asia*, vii. pl. 5 (1863).
Coturnix (Perdicula) asiatica, *Gray, List Gallinæ Brit. Mus.* p. 62 (1867); *id. Hand-l. B.* ii. p. 268 (1870).
Coturnix (Perdicula) cambaiensis, *Gray, List Gallinæ Brit. Mus.* p. 61 (1867).
Perdicula cambaiensis, *Blyth, Ibis*, 1867, p. 160; *Beavan, Ibis*, 1868, p. 386 [Maunbhum, Umballah, Punjab].
Coturnix (Perdicula) cambayensis, *Gray, Hand-l. B.* ii. p. 268 (1870).
Jungle Bush-Quail, *Hume & Marsh. Game B.* ii. p. 109 (1879).

Adult male. Top of the head and nape brown, the feathers on the sides tipped with black; back, rump, and upper tail-coverts earthy brown, with narrow, wavy, transverse black bars; most of the feathers of the mantle with pale buff shafts, and those of the lower back and rump with buff cross-bars, but in very old examples the buff markings are almost or entirely absent; most of the wing-coverts and scapulars have buff shaft-stripes and cross-bars, and are

largely barred and blotched towards the extremity with black; the flight-feathers are dark brown, barred on the outer web with rufous buff—except the first primary, which is uniform brown, and the outer secondaries, which are barred on both webs. Forehead, lores and superciliary stripe, chin, and throat rufous chestnut, the superciliary stripe and the two latter edged above with a yellowish-white band; ear-coverts dark brown, separated from the chestnut supercilium by a narrow white band; rest of the underparts white, regularly barred with black. Thighs, vent, and under tail-coverts pale chestnut; tail brown, with rufous-buff cross-bars edged with black. Bill black or dusky; iris hazel; legs and feet orange; tarsi with a pair of blunt spurs. Total length 6·4 inches, wing 3·3, tail 1·5, tarsus 0·95.

In *immature males* the shaft-streaks on the feathers of the mantle are usually wider; the rufous chestnut of the lores and superciliary stripes is ill-defined, while on the chin and throat it is mixed with white and the shafts of the feathers are white; the rest of the underparts are mixed with vinaceous-buff feathers with narrow white shaft-stripes, and the long barred flank-feathers are vinaceous buff barred with black.

In a *quite young male* the only trace of rufous chestnut is on the chin; the chest and rest of the underparts are dull vinaceous buff, and most of the feathers have white shaft-streaks.

Adult female. Differs from the adult male in having no buff shaft-streaks or bars on the feathers of the back, rump, and upper tail-coverts (in some specimens there are very slight traces of buff on the upper tail-coverts); the wing-coverts much less *barred* with buff and blotched with black, and the fore part of the neck, chest, breast, and belly uniform vinaceous buff.

In *immature females* the feathers of the mantle and many of those on the underparts have white shafts; the wing-coverts are more barred with buff and blotched with black; the rufous-chestnut superciliary stripe and throat of the adult are more or less feebly developed, and the chest and sides of the breast are sometimes faintly and narrowly barred with blackish.

Hab. India and Ceylon.

a-d. ♂ ♀ ad. sk.	Mount Aboo, May, July, Aug. (*G. King*).	Hume Coll.
e, f. ♂ ad. sk.	Mount Aboo.	Col. E. A. Butler [C.].
g. ♂ ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
h. ♀ ad. sk.	Himalayas.	Gould Coll.
i. ♂ ad. sk.	Gangaotri Valley.	
k, l. ♂ ad. et imm. sk.	Simla.	Hume Coll.
m, n. ♂ ♀ ad. sk.	Umballah.	Hume Coll.
o, p. ♂ ♀ ad. sk.	Dehra Dhoon, Jan.	Hume Coll.
q. ♂ ad. sk.	Dehra Dhoon.	Tweeddale Coll.
r. ♀ ad. sk.	Kumaon (*Strachey*).	India Museum [P.].
s. ♂ ad. sk.	Futtegurh, Oct. (*A. Anderson*).	H. Seebohm, Esq. [P.].

t, *u*. ♂ ad. et imm. sk.	Etawah, April.	Hume Coll.
v, *w*. ♀ ad. et imm. sk.	Mirzapore District, March (*R. Thompson*).	Hume Coll.
x–*b'*. ♂ ad. et imm. sk.	Behar.	B. H. Hodgson, Esq. [P.].
c'. ♀ ad. sk.	[Darjeeling.]	Tweeddale Coll.
d'–*f'*. ♂ ♀ ad.sk.	Assam (*Griffiths*).	India Museum [P.].
g'. ♂ ad. sk.	Muddapur, Sept. (*W. E. Brooks*).	Hume Coll.
h'–*l'*. ♂ ♀ ad. et ♂ imm. sk.	Maunbhoom, Jan. and March (*R. C. Beavan*).	Tweeddale Coll.
m', *n'*. ♂ ♀ ad. sk.	Sumbulpur, March.	Hume Coll.
o'–*s'*. ♂ ♀ ad. et ♀ imm. sk.	Karial, near Raipur, Jan., Feb.	Hume Coll.
t'–*k''*. ♂ ♀ ad. et imm. sk.	Raipur.	Hume Coll.
l''–*r''*. ♀ ad. et ♂ imm. sk.	Seoni.	Hume Coll.
s''. Pull. sk.	Nursingpur, Dec.	Hume Coll.
t'', *u''*. ♂ ♀ imm. sk.	Deccan (*Sykes*).	India Museum and Gould Coll. (Types of *C. pentah.*)
v''–*y''*. ♂ ♀ imm. sk.	Valley of the Tapti, W. Khandeish, May.	Hume Coll.
z''–*b*^{3}. ♂ ♀ ad. sk.	Khandeish, March and May (*J. Davidson*).	Hume Coll.
c^3–*f*^{3}. ♂ ♀ ad. et imm. sk.	Khandala, Feb., April (*S. B. Fairbank*).	Tweeddale and Gould Colls.
g^3–*i*^{3}. ♂ ad. et ♂ ♀ imm. sk.	Mahabaleshwur, May (*S. B. F.*).	Hume Coll.
k^3–*u*^{3}. ♂ ♀ ad., imm., et juv. sk.	S. Konkan, Jan.–May (*G. Vidal*).	Hume Coll.
v^3–*a*^{4}. ♂ ♀ ad. et ♂ imm. sk.	Madras.	Hume and Gould Colls.
b^4–*j*^{4}. ♂ ♀ ad. et imm. sk.	Muddur, Mysore, May, July, Aug. (*W. Davison*).	Hume Coll.
g^4. ♀ ad. sk.	Swasamaodrium, Mysore, Aug. (*R. G. W. R.*).	Tweeddale Coll.
h^4–*k*^{4}. ♀ ad. et ♂ ♀ imm. sk.	Segore, Feb. (*Marie*).	Hume Coll.
l^4. ♂ ad. sk.	Pothanore, Oct. (*H. R. P. Carter*).	Hume Coll.
m^4–*o*^{4}. ♂ ♀ ad. et ♂ imm. sk.	Ceylon, Sept. (*W. V. Legge*).	Sharpe and Hume Colls.
p^4, *q*^{4}. Skeletons.		Zool. Soc. Coll.

2. Perdicula argoondah.

Marbled Quail, *Lath. Gen. Hist.* viii. p. 312 (1823) [♂ juv.].
Coturnix argoondah, *Sykes, P. Z. S.* 1832, p. 153 [Deccan]; *id. Trans. Zool. Soc.* ii. p. 17, pl. ii. (1841); *Gray, List of B.* pt. iii. *Gall.* p. 39 (1844); *id. Gen. B.* iii. p. 507 (1846); *Burgess, P. Z. S.* 1855, p. 31 [Habits]; *Hume, Str. F.* vii. p. 156 (1878).

Perdicula argoondah, *Layard, Ann. Mag. N. H.* (2) xiv. p. 107 (1854) [Ceylon]; *Hume, Nests & E. Ind. B.* p. 545 (1873); *id. Str. F.* vii. p. 159 (1878) [Distribution]; *Davidson & Wend. Str. F.* vii. p. 87 (1878) [Deccan]; *Hume & Marsh. Game B. Ind.* ii. p. 117, pl. (1879); *Butl. Cat. B. Sind etc.* p. 55 (1879); *id. Cat. B. S. Bombay*, p. 69 (1880); *id. Str. F.* ix. p. 423 (1880) [Bombay]; *Swinh. & Barn. Ibis*, 1885, p. 131 [Central India]; *Oates, ed. Hume's Nests & E. Ind. B.* iii. p. 441 (1890).

Coturnix argoonda, *Newton, Ibis*, 1861, p. 116 [Mauritius, introduced].

Perdicula asiatica, *Jerd.* (*nec Lath.*) *B. Ind.* iii. p. 583 (1863); *Ball, Str. F.* ii. p. 427 (1874) [Chota Nagpur ?]; *Butler, Str. F.* iv. p. 7 (1876) [N. Guzerat]; *Fairb. Str. F.* iv. p. 262 (1876) [Ahmednagar and Deccan generally].

Coturnix (Perdicula) argoondah, *Gray, List Gallinæ Brit. Mus.* p. 62 (1867); *id. Hand-l. B.* ii. p. 269 (1870).

Rock Bush-Quail, *Hume & Marsh. Game B.* ii. p. 117 (1879).

Perdicula argoonda, *Davidson, Str. F.* x. p. 317 (1882) [W. Khandeish]; *Taylor, Str. F.* x. p. 465 (1887) [Manzeerabad, Mysore].

Adult male. Differs from the adult male of *P. asiatica* in having the feathers of the upper parts, especially the back of the head, nape, and mantle, transversely barred with buff and black or grey edged on either side with black; the primaries and secondaries are barred on *both* webs with rufous buff; the forehead, lores, and superciliary stripe, and the chin and throat dull brick-red, not margined above by a white band. Iris dark brown; bill horny brown above, lavender-blue below; legs and feet orange-red; tarsi armed with blunt spurs. Total length 6·5 inches, wing 3·3, tail 1·7, tarsus 1.

Immature males have the upper parts vinaceous brown with irregular wavy black lines and narrow buff shaft-stripes edged on either side with black: as age increases each shaft-stripe becomes constricted into four or five isolated buff patches; these spread transversely and eventually become united with other pale spots situated on the margins of the feather. Thus without any moult taking place the feathers become transversely barred with buff as in the adult.

A *very young male* has the whole of the underparts buff, washed with vinaceous and indistinctly barred with black.

Adult female. Has the whole of the upper parts dull vinaceous, with some faint indications of dusky cross-lines and buff marks; the flight-feathers barred on the outer and mottled on the inner web with rufous buff; the middle of the chin, throat, and belly whitish, and the rest of the underparts dull vinaceous.

Immature females have the upper parts more or less distinctly barred and mottled with buff and black.

Hab. India; ? Ceylon; Mauritius (introduced).

a, b. ♂ imm. et ♀ ad. sk.	Kutch.	Hume Coll.
c–e. ♂ ♀ ad. sk.	Kattiawar, Feb., June.	Capt. Lloyd [P.].
f. ♀ ad. sk.	Godra, Panch Mehals, Sept.	Hume Coll.
g. ♂ ad. sk.	Deesa, Oct. (*E. A. Butler*).	Hume Coll.
h. ♀ ad. sk.	Mt. Aboo, May.	Hume Coll.

i–l. ♂ ad. et ♂ ♀ imm. sk.	Sambhur, May (*R. M. Adam*).	Hume Coll.
m–o. ♂ ad. et imm. sk,	Near Ajmere, Dec., Jan.	Hume Coll.
p. ♂ ad. sk.	Near Jodhpur, Feb.	Hume Coll.
q, r. ♂ ♀ ad. sk.	Jhansie, Aug.	Hume Coll.
s. ♂ ad. sk.	Jubbulpur.	Tweeddale Coll.
t. ♂ imm. sk.	Gurgaon District, Jan. (*A. O. H.*).	Hume Coll.
u. ♀ ad. sk.	Delhi.	Hume Coll.
v, w. ♂ imm. sk.	N.W. India.	Tweeddale Coll.
x, y. ♂ imm. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
z–e'. ♂ ♀ ad. et ♂ imm. sk.	Etawah, April and Dec.	Hume Coll.
f'–k'. ♂ ♀ ad. sk.	Etawah, Dec. (*A. Anderson*).	Seebohm Coll.
l'. ♀ imm. sk.	Coimbatore, Oct. (*A. G. R. Theobald*).	Hume Coll.
m', n'. ♀ ad. sk.	Bassein, N. Konkan, Feb. (*James*).	Hume Coll.
o'–u'. ♂ ♀ ad. et ♂ imm. sk.	Deccan (*Sykes*).	India Museum and Gould Coll. (Types of *C. argoondah.*)
v', w'. ♂ ♀ ad. sk.	Khandeish.	Tweeddale Coll.
x'–a''. ♂ ♀ ad. et imm. sk.	Khandeish, March, May, Oct. (*J. Davidson*).	Hume Coll.
b''. ♀ imm. sk.	Western Ghauts.	Gould Coll.
c'', d''. ♂ ♀ ad. sk.	Belgaum, July and Aug. (*E. A. Butler*).	Hume Coll.

12. MICROPERDIX.

Type.

Microperdix, *Gould, B. As.* vii. pl. iii. (1862).... M. erythrorhyncha.

Tail of 10 feathers, fairly developed, rounded, and rather more than half the length of the wing.

1st primary equal in length to the 10th; 6th slightly longest.

Tarsi without spurs, and equal to the middle toe and claw.

Range. Peninsula of India and Manipur.

Key to the Species.

A. Throat white.
  a. White band between the eyes narrower; chest browner. Size larger; wing 3·3–3·4..... *erythrorhyncha* ♂, [p. 203.
  b. White band between the eyes wider; chest greyer. Size smaller; wing 3·0–3·1.... *blewitti* ♂, p. 204.
B. Throat, chest, and breast dull rufous chestnut. Size larger; wing 3·3 ..... *erythrorhyncha* ♀, [p. 203.
C. Throat, chest, and breast pale brick-colour. Size smaller; wing 3·1 ..... *blewitti* ♀, p. 204.
D. Throat dark chestnut ..... *manipurensis* ♂, p. 204.
E. Throat blackish grey..... *manipurensis* ♀, p. 204.

1. Microperdix erythrorhyncha.

Coturnix erythrorhyncha, *Sykes, P. Z. S.* 1832, p. 153 [Valley of Karli, N. Konkan]; *Gray, Ill. Ind. Zool.* ii. pl. 44. fig. 2 (1834); *Sykes, Trans. Zool. Soc.* ii. p. 16, pl. i. (1841); *Gray, List of B.* pt. iii. *Gall.* p. 40 (1844); *id. Gen. B.* iii. p. 507 (1846).

Perdix erythrorhyncha, *Blyth, J. A. S. Beng.* xi. p. 808 (1842) [Southern India].

Perdicula erythrorhyncha, *Bonap. C. R.* xlii. p. 881 (1856); *Jerd. B. Ind.* iii. p. 584 (1863); *Bulger, P. Z. S.* 1866, p. 571 [Wellington, Nilghiris]; *Blyth, Ibis*, 1867, p. 160; *Blanf. Ibis*, 1867, p. 464 [Siroucha]; *Elwes, Ibis*, 1870, p. 528 [Cardamum Hills, Travancore]; *Fairb. Str. F.* v. p. 409 (1877) [Kokaikànal, Palanai Hills]; *Davidson & Wend. Str. F.* vii. p. 87 (1878) [Sholapur, Poona, Satara Hills].

Microperdix erythrorhyncha, *Gould, B. Asia*, vii. pl. 3 (1862); *Hume, Nests & E. Ind. B.* p. 548 (1873); *Fairb. Str. F.* iv. p. 262 (1876) [Khandala, Mahableshwar, &c.].

Coturnix (Microperdix) erythrorhyncha, *Gray, List Gallinæ Brit. Mus.* p. 62 (1867); *id. Hand-l. B.* ii. p. 269 (1870).

Microperdix erythrorhynchus, *Hume & Marsh. Game B. Ind.* ii. p. 123, pl. (1879); *Butler, Str. F.* ix. p. 423 (1880) [Bombay]; *id. Cat. B. S. Bombay*, p. 69 (1880); *Davison, Str. F.* x. p. 411 (1883) [Nilghiris, Wynaad, Mysore]; *Terry, Str. F.* x. p. 479 (1887) [Palanai Hills]; *Oates, ed. Hume's Nests & E. Ind. B.* iii. p. 442 (1890).

Adult male. Top of the head black, except the middle of the occiput, which, like the nape and rest of the upper parts, is earthy brown; a white band between the eyes is continued backwards down each side of the head and forms a **U**-shaped white mark; the feathers of the back, rump, and upper tail-coverts have a rounded black subterminal spot narrowly circumscribed with buff; the wing-coverts and scapulars, which are rather warmer brown than the back, have narrow white shaft-stripes, buff cross-bars, and are mostly blotched with black near the extremity of the inner web; flight-feathers blackish, the outer four (primaries) margined and the rest barred and mottled with rufous buff. Forehead, lores, superciliary stripe, sides of face, feathers round the gape and on the chin black: ear-coverts dark brown; throat white, irregularly margined below with black; neck and chest greyish brown, washed with rufous and gradually shading into rufous chestnut on the rest of the underparts; the feathers of the neck and chest are usually more or less spotted with black like those of the back, but on the sides, flanks, and under tail coverts the spots are very much larger and edged with whitish. Tail black, with narrow buff or pale rufous bars. Iris brown; bill, legs, and feet rich red. Tarsi without spurs. Total length 7 inches, wing 3·4, tail 1·9, tarsus 1.

In *immature males* the forehead, superciliary stripes, sides of the head, chin, and throat are white washed with rufous, and some of the feathers of the mantle and chest have pale buff shaft-stripes; otherwise the plumage resembles that of the adult.

Adult female. Like the adult male, but the forehead, lores, superciliary stripe, sides of the head, chin, and throat are dull rufous

chestnut, and the crown of the head is almost entirely brown, with only a few black spots on the sides.

In *immature females* the crown is mostly black, as in the male.

Hab. South-western hills of the Indian Peninsula, ranging north to Bombay and south to the Cardamum Hills.

a. ♀ ad. sk.	S.W. India.	Tweeddale Coll.
b. ♀ ad. sk.	Mahableshwur Hills, May (*S. B. Fairbank*).	Hume Coll.
c–g. ♂ ♀ ad. sk.	N. Konkan (*Sykes*).	India Museum. (Types of the species.)
h. ♂ ad. sk.	Belgaum, Aug. (*E. A. Butler*).	Hume Coll.
i. ♂ ad. sk.	Madras.	India Museum [P.].
k–r. ♂ ♀ ad. et imm. sk.	Wynaad, March–May (*W. Davison*).	Hume Coll.
s–k'. ♂ ♀ ad. et imm. sk.	Ootacamund, Jan.–April and June (*W. Davison*).	Hume Coll.
l'–p'. ♂ ♀ ad. sk.	Coonoor, July, Sept. (*R. G. W. R.*).	Hume and Tweeddale Colls.
q'–t'. ♂ ad. sk.	Kotagherry, Oct. (*Miss Cockburn*).	Hume Coll.
u', v'. ♂ ad. sk.	Pykarra.	Hume Coll.

2. Microperdix blewitti.

Perdicula erythrorhyncha, *Ball (nec Sykes)*, *Str. F.* ii. p. 428 (1874) [Chota Nagpur and Satpura Hills].

Microperdix blewitti, *Hume*, *Str. F.* ii. p. 512 (1874) [Raipur]; *Ball*, *Str. F.* iii. p. 294 (1875); *id. Str. F.* vii. p. 225 (1878); *Hume & Marsh. Game B. Ind.* ii. p. 130, pl. (1879).

Adult male. Closely resembles the male of *M. erythrorhyncha*, from which it can only be distinguished by having the white band between the eyes nearly twice as wide and the black forehead much narrower, the chest greyer, and the underparts paler. It is also somewhat smaller. Total length 6·8 inches, wing 3·1, tail 1·6, tarsus 0·95.

Adult female. Somewhat paler than the female of *M. erythrorhyncha*, especially on the forehead, lores, superciliary stripes, chin, throat, and underparts, which are pale dull brick-colour.

Hab. Central Provinces of India.

a. ♀ ad. sk.	Balaghat District, Central Provinces, April (*R. Thompson*).	Hume Coll.
b–i. ♂ ♀ ad. et imm. sk.	Seoni.	Hume Coll.
k, l. ♂ ad. et ♀ imm. sk.	Bardumkhem, Raipur District, Dec.	Hume Coll.
m–u. ♂ ♀ ad. sk.	Raipur.	Hume Coll.
v, w. ♂ ♀ ad. sk.	Karial, Raipur, Feb.	Hume Coll.

3. Microperdix manipurensis.

Perdicula manipurensis, *Hume*, *Str. F.* ix. p. 467 (1880) [Bases of Eastern Manipur Hills]; *Reich. & Schal. J. f. O.* 1883, p. 408; *Hume*, *Str. F.* xi. p. 309 (1888).

Adult male. Whole of the upper parts dark grey; top of the head, nape, back, rump, and upper tail-coverts tipped and barred with black; wing-coverts the same, but mostly blotched with black on the subterminal part of the inner web; flight-feathers blackish, barred with pale buff on the outer web, except the first primary, which is narrowly margined with buff on the outer web, and the last secondaries, which are barred on both; forehead, lores, superciliary stripe, chin, and throat dark chestnut; a white stripe from the gape to the eye and continued behind to the dark grey ear-coverts; neck and upper parts of chest grey, shading into tawny buff on the breast and belly, each feather with a black shaft-stripe and those of the breast and belly with a wide black subterminal cross-bar; under tail-coverts black, tipped and spotted on each web with white; tail mottled and barred with dark grey and black. Total length 6·5 inches, wing 3·4, tail 2, tarsus 1·05.

In *immature males* the last secondaries are black, more widely barred with tawny buff; otherwise the plumage is as above.

Adult female. Differs from the adult male in having none of the dark chestnut markings on the head, chin, and throat, the two latter being white or whitish grey and the breast and belly buff instead of tawny.

An *immature female* has the last secondaries marked like those of the immature male, but is otherwise similar to the above.

Hab. Eastern Manipur hills.

a–g. ♂ ♀ ad. et imm. sk.	Phalel, Manipur, April (*A. O. H.*).	Hume Coll. (Types of the species.)

13. ARBORICOLA *.

	Type.
Arborophila, *Hodgs. Madras Journ.* v. p. 303 (1837).	A. torqueola.
Arboricola, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844)	A. torqueola.
Arboriphila, *Gray, Cat. Mamm. & B. Hodgs.* p. 127 (1846)	A. torqueola.
Arborocola, *Gray, Gen. B.* iii. p. 506 (1846)	A. torqueola.
Tropicoperdix, *Blyth, J. As. Soc. Beng.* xxviii. p. 415 (1859)	A. chloropus.
Phænicoperdix, *Blyth, fide Hartl. Arch. f. Naturges.* xxvi. pt. ii. p. 99 (1861)	A. chloropus.
Oreoperdix, *Swinh. Ibis*, 1864, p. 425	A. crudigularis.
Peloperdix, *Blyth, fide Gray, List Gallinæ Brit. Mus.* p. 58 (1867)	A. charltoni.
Hyloperdix, *Sundev. Tent.* p. 116 (1872)	A. torqueola.

* Doubtful species:—Perching Partridge, *Lath. Gen. Hist.* viii. p. 281 (1823).

Perdix (Arboricola), sp., *v. Martens, J. f. O.* 1866, p. 25.

Arborophila, sp., *Walden, Tr. Z. S.* ix. p. 223 (1875).

Under this title a specimen in the Military Library at Manilla is briefly characterized as follows:—"Head greenish black; breast vinous red, streaked with black; sides pale red with black spots." This description is so vague that it is impossible to form a decided opinion on it, but probably the bird represents a distinct species of this genus, inhabiting Luzon.

Nails long and nearly straight.

Tail of 14 short, somewhat rounded feathers, the middle pair rather longer than the outer and less than half the length of the wing.

Fore part of the throat and neck often thinly covered with feathers or nearly naked.

A supraorbital chain of bones. [Wood-Mason, Ann. N. H. (4) xvi. p. 145.]

1st primary about equal in length to the 9th, sometimes to the 8th or 10th; 4th or 5th slightly longest.

Range. Himalayas and Indo-Chinese countries; Sumatra, Java, Borneo, Hainan, Formosa, ? Philippines.

Key to the Species.

A. Concealed patch of downy feathers under the wing grey.
  a. Feathers of the sides and flanks grey or grey edged with chestnut, usually with a white spot or shaft-stripe on each.
    a'. Upper back olive-brown, barred and fringed with black.
      a''. Top of the head bright chestnut; chin and throat black, in some specimens each feather narrowly margined with white ..... *torqueola* ♂, p. 207.
      b''. Top of the head brownish or olive-brown, each feather tipped with black.
        a'''. Chin, throat, and front of neck rufous, the two latter spotted all over with black, sometimes on the sides only..... *torqueola* ♀, p. 207.
        b'''. Chin and throat black; front of neck black, each feather edged with white. *atrogularis* ♂ ♀, [p. 209.
        c'''. Chin and throat black; front of neck orange-scarlet ..... *ardens*, p. 210.
        d'''. Chin, upper part of throat, and front of neck white; lower part of throat black..... *crudigularis* ♂ ♀, [p. 211.
    b'. Upper back uniform olive-brown, not barred with black; sometimes some of the feathers are slightly fringed with black at their extremities.
      c''. Chest grey; top of the head olive-brown, each feather edged with blackish brown.
        e'''. Front of the neck bright rufous. [p. 211.
          a^4. Chin and throat black ..... *intermedia* ♂ ♀, [p. 212.
          b^4. Chin and throat rufous, thickly spotted with black ..... *rufogularis* ♂ ♀,
        f'''. Front of the neck black, separated from the chest by a narrower white and a wider dark chestnut band .. *gingica*, p. 213.
      d''. Chest and top of the head chestnut; chin and throat bright rufous; front of neck white, divided from the chest by a narrow black band ..... *mandellii* ♂ ♀, p. 214.

b. Feathers of the sides and flanks uniform chestnut ..... *javanica* ♂ ♀, p. 214.
c. Feathers of the sides and flanks black, with narrow wide-set white bars ..... *rubrirostris* ♂ ♀, [p. 215.
d. Feathers of the sides and flanks each with a large subterminal white spot partially or wholly bordered with black.
c'. Chest brownish ochre or olive-buff; scapulars chestnut at the extremity; superciliary streak pale buff ..... *brunneopectus* ♂ ♀, [p. 216.
d'. Chest bright rust-red or reddish chestnut; scapulars olive-brown at the extremity.
e''. Superciliary stripe grey ..... *hyperythra*, p. 217.
f''. Superciliary stripe rust-red..... *erythrophrys* ♂ ♀, [p. 218.
e. Feathers of the sides and flanks greyish, widely barred with white and black at the extremity.
e'. Feathers of the back dark olive-brown, faintly margined with blackish..... *orientalis*, p. 218.
f'. Feathers of the back golden brown, fringed and barred with black..... *sumatrana*, p. 219.
B. Concealed patch of downy feathers under the wing snow-white. Feathers of the sides and flanks irregularly barred or marked and mottled with brownish black and buff.
f. Sides and flanks marked and mottled with black and buff; chest olive-brown, with wavy bars of black ..... *chloropus* ♂ ♀, p. 219.
g. Sides and flanks barred with black and buff; upper half of chest chestnut ..... *charltoni* ♂ ♀, p. 221.

1. Arboricola torqueola.

Olive Partridge, *Lath. Gen. Hist.* viii. p. 303 (1823).
Perdix torqueola, *Valenc. Dict. Sci. Nat.* xxxviii. p. 435 (1825); *Gray, Gen. B.* iii. p. 506 (1846); *id. List Gallinæ Brit. Mus.* p. 57 (1867); *id. Hand-l. B.* ii. p. 267, no. 9693 (1870).
Perdix megapodia, *Temm. Pl. Col.* v. pls. 35 & 36 [nos. 462, 463] (1828); *Less. Traité Orn.* p. 506 (1831); *Strickl. Ann. Mag. N. H.* viii. p. 374 (1842).
Perdix olivacea, *Gray, in Griff. An. Kingd.* iii. p. 54 (1829); *id. Ill. Ind. Zool.* i. pl. 57 (1830–32).
Perdix torquata, *Less. Traité Orn.* p. 506 (1831).
Arborophila olivacea, *Hodgs. Madr. Journ.* 1837, p. 303; *Gray, List Gall. B.* iii. p. 37 (1844).
Arboricola olivacea, v. torqueola, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844); *id. Icon. ined. in Brit. Mus.* nos. 111–114 [Nepal].
Arboriphila torqueola, *Gray, Cat. Hodgson*, p. 127 (1846); *Hume, Nests & Eggs Ind. B.* p. 544 (1873); *id. Str. F.* ii. p. 449 (1874).
Arboricola torqueola, *Blyth, J. As. Soc. Beng.* xviii. p. 819 (1849); *id. Cat. B. Mus. As. Soc.* p. 252 (1849); *id. J. As. Soc. Beng.* xxiv. p. 276 (1857) [Simla and Mussooree Hills, Sikhim]; *Adams, P. Z. S.* 1858, p. 503; *Irby, Ibis*, 1861, p. 236 [Kumaon]; *Jerd. B. Ind.* ii. p. 577 (1864); *Blyth, Ibis*, 1867, p. 159; *v. Pelz. Ibis*, 1868, p. 321 [Koteghur]; *Beavan, Ibis*, 1868, p. 385 [Darjeeling, Sikhim, 8000 ft.]; *Bulger, Ibis*, 1869, p. 170 [Mts. Tongloo and

Tendong, Sikhim]; *Marshall, Ibis*, 1884, p. 423 [Chamba]; *Grant, Ibis*, 1892, p. 392.

Hyloperdix torqueola, *Sundevall, Tent.* p. 116 (1872); *Nichols. ed. Sundevall's Tent.* p. 203 (1889).

Arboricola torqueolus, *Hume, Str. F.* viii. p. 111 (1879); *Scully, Str. F.* viii. p. 349 (1879) [Nepal]; *Hume & Marsh. Game B.* ii. p. 69, pl. (1879).

Adult male. Top of the head bright chestnut, shading into rusty red on the lores. Feathers of the nape partly rust-red and partly white, with a wide black band down the middle. Upper back olive-brown, fringed and barred with black; lower back, rump, and upper tail-coverts the same, but each feather ornamented in addition with a triangular or heart-shaped black patch situated near the extremity. Lesser and median wing-coverts and scapulars pale olive-brown, widely margined on the sides with chestnut; the latter and some of the median coverts with a subterminal black patch and tipped with chestnut. Primaries and their coverts brownish black, slightly margined with rust-colour at the extremity. Secondaries the same, but with the outer half of the outer web chestnut shading into buff at the extremity and dotted here and there with blackish brown; secondary coverts with the whole outer web chestnut and the inner blackish brown. Ear-coverts bright rust-red; superciliary stripe, sides of the face, chin, and throat black (in some specimens the superciliary stripe is edged superiorly and the throat-feathers narrowly margined with white); a narrow white band, commencing at the base of the lower mandible, borders the sides of the chin and throat; behind the ear-coverts, on the side of the neck, lies a patch of rust-coloured feathers spotted with black; fore part and rest of the sides of the neck black, narrowly margined with white and divided from the grey chest by a wide white band. Middle of breast and belly white; feathers of the sides and flanks grey, widely margined on either web with chestnut and ornamented by a narrow white shaft-stripe or spot. Thighs and shorter under tail-coverts a mixture of olive-grey and buff, barred with black and spotted occasionally with white; longer under tail-coverts black tipped with white. Tail-feathers olive-brown, irregularly marked with black and with an ill-defined subterminal black bar. Bill black; orbital skin crimson; iris brown or reddish brown; legs and feet pale violet or flesh-colour. Total length 11·8 inches, wing 6, tail 2·7, tarsus 1·7.

Young males have a white spot at the extremity of the grey chest-feathers; the sides and flanks also have white spots and are almost devoid of chestnut margins; and the outer webs of the primaries are margined with rufous buff. Orbital skin blue-grey, tinged with red.

Adult female. Differs from the male in having the top of the head brown or olive-brown, each feather with a black shaft-stripe; the wing-coverts more or less mottled with black; the ear-coverts olive-brown; the superciliary stripes, sides of the face, chin, throat, and neck rust-coloured or rufous buff, each feather with a terminal black spot; a rust-red band separating the neck and chest, which is

brownish grey tinged with rusty, and the sides and flanks with subterminal white spots and blotches.

Young females have a white spot at the extremity of the feathers of the chest as well as the underparts, and the outer webs and tips of the primaries and secondaries are mottled with rufous buff.

Hab. Outer ranges of the Himalayas from Chamba and the Ravi to the eastern border of Sikhim and possibly the Naga Hills. Ranging from 5000–14,000 feet.

a. ♂ ad. st.	India.	Purchased.
b. ♀ imm. sk.	Northern India.	India Museum [P.].
c. ♀ ad. sk.	Kotekhaie, Feb.	Hume Coll.
d–*m*. ♂ ♀ ad. sk.	Koteghur.	Hume Coll.
n. ♂ ad. sk.	Koteghur, June (*R.C.Beavan*).	Tweeddale Coll.
o, *p*. ♂ ad. et ♀ imm. sk.	Simla.	Capt. S. Pinwill [P.].
q, *r*. ♂ ad. sk.	Koomarsain, Nov.	Hume Coll.
s–*u*. ♂ ad. sk.	Kumaon (*Strachey*).	India Museum [P.].
v, *w*. ♀ ad. sk.	Bhagarratti Valley.	Hume Coll.
x. ♂ ad. sk.	Almorah, July (*G. F. L. Marshall*).	Hume Coll.
y. ♂ ad. sk.	Almorah, Nov.	Hume Coll.
z. ♀ ad. sk.	Naini Tal, Oct.	Hume Coll.
a'–*l'*. ♂ ♀ ad. sk.	Nepal.	B. H. Hodgson, Esq. [C.].
m'. ♀ ad. sk.	Nepal Valley, July (*J. Scully*).	Hume Coll.
n'–*t'*. ♂ ♀ ad. sk.	Native Sikhim, Jan., Feb., March (*L. Mandelli*).	Hume Coll.
u'. ♂ ad. sk.	Native Sikhim, Sept. (*J. Biddulph*).	Tweeddale Coll.
v'–*o²*. ♂ ♀ ad. et ♂ juv. sk.	Sikhim, Jan., Feb., Mar., Aug., Sept., Dec. (*L. Mandelli*).	Hume Coll.
p²–*w²*. ♂ ♀ ad. sk.	Darjeeling, Mar., April.	Hume Coll.
x²–*a³*. ♂ ♀ ad. sk.	Darjeeling.	Tweeddale Coll.
b³. ♂ ad. sk.	Darjeeling.	Gould Coll.
c³. ♀ juv. sk.	Bajoe, Sept. (*J. Biddulph*).	Tweeddale Coll.
d³. ♂ ad. sk.	[Assam] (*Sykes*).	India Museum.
e³. Skeleton.	India.	

2. Arboricola atrogularis.

Arboricola atrogularis, *Blyth, J. As. Soc.* xviii. p. 819 (1849) [Assam, Sylhet]; *id. Cat. B. Mus. As. Soc.* p. 253 (1849); *id. J. As. Soc. Beng.* xxiv. p. 276 (1856); *Jerd. B. Ind.* ii. p. 579 (1864) [Tipperah and Chittagong]; *Blyth, Ibis*, 1867, p. 159; *Hume, Str. F.* v. p. 44 (1877); *Anderson, Yunnan*, ii. *Birds*, p. 673 (1878) [Kachin Hills]; *Hume & Marsh. Game B.* ii. p. 79, pl. (1879); *Hume, Str. F.* viii. p. 111 (1879); *id. Str. F.* xi. p. 306 (1888); *Grant, Ibis*, 1892, p. 393.

Perdix atrogularis, *Gray, List Gallinæ Brit. Mus.* p. 58 (1867); *id. Hand-l. B.* ii. p. 267, no. 9695 (1870).

Arborophila atrogularis, *Hume, Str. F.* ii. p. 449 (1874).

Arboricola atrigularis, *Oates, ed. Hume's Nests & Eggs*, iii. p. 439 (1890).

Adult male and female. Feathers of the top of the head olive-brown, shading into grey or white on the lores, each with a black

spot at the extremity; nape and back of the neck rufous buff, also spotted with black at the extremity. Back, rump, and upper tail-coverts olive-brown, fringed and barred with black; the subterminal bars on the lower back, rump, and upper tail-coverts wider than the rest, sometimes forming a triangular black spot. Lesser and median wing-coverts light olive-brown, with wide-set narrow wavy black lines and shaft-blotches or spots of black. Basal half of the scapulars dull chestnut mottled with black, the outer half ornamented by bands of pale olive-buff, black, and chestnut. Primaries and secondaries and their coverts similar to those of *A. torqueola*. Ear-coverts buff. Superciliary stripe black, edged superiorly with white, a wide white triangular patch of white commencing at the base of the lower mandible. Chin and throat black; front of neck black, margined with white; chest grey; middle of breast and belly white; feathers of the sides and flanks grey edged with olive-brown and each with an oval white spot on the shaft near the extremity. Under tail-coverts black, irregularly barred with brownish buff and widely tipped with white. Tail olive-brown, barred and mottled with black. Bill black; iris brown; orbital and gular skin intense red; legs and feet orange-red.

Male. Total length 10 inches, wing 5·6, tail 2·2, tarsus 1·7.

Female. Total length 9 inches, wing 5, tail 2, tarsus 1·5.

In what appears to be a rather less mature male from Dibrughur most of the breast-feathers have the basal two-thirds irregularly barred with black.

Hab. N.E. India, ranging from Sudiya in Eastern Assam to the Khasia and Garo Hills, southwards through Cachar, Sylhet, Tipperah, Hill Tipperah, Manipur, and Chittagong; also found in the Kachin Hills, east of Bhamo.

a. Ad. sk.	Assam (*McClelland*).	India Museum [P.].
b, c. ♂ ♀ ad. sk.	Sudiya, June (*J. Cockburn*).	Hume Coll.
d–g. ♂ ad. sk.	Dibrughur, Jan., April (*J. R. Cripps*).	Hume Coll.
h, i. ♀ ad. sk.	N. Khasia Hills, Feb., March (*A. W. Chennell*).	Tweeddale Coll.
k, l. Ad. sk.	[Khasia Hills.]	India Museum [P.].
m. Ad. sk.	Garo Hills, Feb. (*H. H. Godwin-Austen*).	Tweeddale Coll.
n. Ad. sk.	Cachar (*J. Inglis*).	Hume Coll.
o. ♀ ad. sk.	Sylhet, May (*J. R. Cripps*).	Hume Coll.
p. Ad. sk.	Manipur.	Dr. G. Watt [P.].
q–s. ♂ ad. sk.	Tipperah, Jan., March.	Hume Coll.
t, u. ♂ ad. sk. et sternum.	Kachin Hills, Feb.	Dr. J. Anderson [P.].

3. Arboricola ardens.

Arboricola ardens, *Styan, Bull. Orn. C.* no. ii. p. vi (1892); *id. Ibis*, 1893, pp. 56, 436, pl. xii. [Liuwowan, Hainan].

Adult male (type). Most nearly allied to *A. atrogularis* and *A. crudigularis*, but differing widely from both as well as from all other members of the genus in having an orange-scarlet patch of feathers on the fore part of the neck and middle of the chest. The

texture of this patch of brightly-coloured feathers resembles spun glass, the vanes being rather stiff, hair-like, and shining. It reminds one strongly, both as regards colour and texture, of a similar patch met with in some of the Horned Pheasants, such as *Tragopan satyra* or *T. melanocephala*. The same orange-red extends in a less degree round the sides of the neck, and the breast and belly are faintly washed with the same colour. Total length 8 inches, wing 4·8, tail 1·75, tarsus 1·3.

Hab. Mountains of Hainan.

4. Arboricola crudigularis.

Oreoperdix crudigularis, *Swinhoe*, *Ibis*, 1864, p. 426 [Formosa], 1865, p. 542, 1866, pp. 133 & 401; *id. P. Z. S.* 1871, p. 400; *David & Oustal. Ois. Chine*, p. 393 (1877).

Perdix crudigularis, *Gray*, *List Gallinæ Brit. Mus.* p. 57 (1867); *id. Hand-l. B.* ii. p. 267, no. 9692 (1870).

Arboricola crudigularis, *Blyth*, *Ibis*, 1867, p. 160; *Grant*, *Ibis*, 1892, p. 393.

Adult male and female. Differs from *A. atrogularis* in having the nape and back of the neck mixed with chestnut; the barring on the upper parts wider and darker; the chin, upper part of the throat, cheeks, ear-coverts, and front of the neck white; and the lower part of the throat black. Bill black; iris olive-brown; bare skin round the eye purplish flesh-colour; legs orange-red.

Male. Total length 9·5 inches, wing 5·5, tail 2·2, tarsus 1·55.

Female. Total length 9·3 inches, wing 5·3, tail 2·1, tarsus 1·55.

Hab. Mountains of the interior of Formosa.

a. ♀ ad. sk.	Tamsuy, Formosa, June (*R. Swinhoe*).	Tweeddale Coll.
b. Ad. sk.	Formosa, March (*R. Swinhoe*).	Tweeddale Coll.
c. ♂ ad. sk.	Formosa, March (*R. Swinhoe*).	Hume Coll.
d. Ad. sk.	Formosa, April (*R. Swinhoe*).	Gould Coll.
e. ♂ ad. st.	Formosa.	R. Swinhoe, Esq. [C.].
f–i. Sterna and shoulder-girdles.	Formosa.	R. Swinhoe, Esq. [C.].

5. Arboricola intermedia.

Arboricola intermedia, *Blyth*, *J. As. Soc. Beng.* xxiv. p. 277 (1856) [? Arrakan]; *id. Ibis*, 1867, p. 159; *id. & Walden, Cat. Mamm. & B. Burma*, p. 150 (1875) [Arrakan]; *Oates*, *B. Burmah*, ii. p. 327 (1883) [between Prome and Tonghoop]; *id. ed. Hume's Nests & Eggs*, iii. p. 440 (1890); *Grant*, *Ibis*, 1892, p. 393.

Arborophila intermedia, *Hume*, *Str. F.* ii. p. 450 (1874); *Oates*, *Str. F.* iii. p. 344 (1875).

Arboricola intermedius, *Hume & Marsh. Game B.* ii. p. 85, pl. (1879); *Hume*, *Str. F.* viii. p. 111 (1879); *id. Str. F.* xi. p. 507 (1888) [E. Manipur].

Adult male and female. Differ from the male of *A. torqueola* in having the top of the head brown or olive-brown, shading into grey on the forehead and with a black spot at the extremity of each feather;

the back, rump, and upper tail-coverts devoid of black bars, though in some specimens the feathers are fringed with dusky; the back and sides of the neck are rufous buff or rust-colour, each feather with a rather large terminal black spot; the feathers of the superciliary stripe white with black shaft-stripes, those of the sides of the face and ear-coverts whitish or pale buff tipped with black; chin and throat black; and the fore part of the neck bright rust-colour. Bill black; iris light brown; gape, eyelids, and orbital space dull crimson; legs and feet coral-pink.

Male. Total length 11 inches, wing 5·6, tail 2·3, tarsus 1·8.

Female. Total length 10 inches, wing 5·4, tail 2·1, tarsus 1·6.

Hab. N.E. India: ranging from the Garo and Naga Hills through Cachar, Manipur, and Arrakan to Pegu; also obtained near Bhamo in Upper Burma.

a. Ad. sk.	Garo Hills (*H. H. Godwin-Austen*).	Tweeddale Coll.
b–f. ♂ ♀ ad. sk.	Machi, Manipur, May (*A. O. H.*).	Hume Coll.
g–r. ♂ ♀ ad. sk.	Aimole, Manipur, April (*A. O. H.*).	Hume Coll.
s. Ad. sk.	Bhamo, June (*E. W. Oates*).	Hume Coll.
t–v. ♂ ad. sk.	Arrakan Hills, Jan. (*E. W. Oates*).	Hume Coll.
w–y. ♂ ♀ ad. sk.	Arrakan Hills, Jan., May.	E. W. Oates, Esq. [C.].
z. Ad. st.	Arrakan.	Zoological Society.
a'. Ad. sk.	Pegu.	Tweeddale Coll.

6. Arboricola rufogularis.

Arboricola rufipes, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844); *id. Icon. ined. in Brit. Mus.* no. 112 [Nepal].

Arboricola rufogularis, *Blyth, J. As. Soc. Beng.* xviii. p. 819 (1849) [Sikhim, lower range]; *id. Cat. B. Mus. As. Soc.* p. 253 (1849); *id. J. As. Soc. Beng.* xxiv. p. 276 (1855); *Jerd. B. Ind.* ii. p. 578 (1864); *Blyth, Ibis*, 1867. p. 159; *Beavan, Ibis*, 1868, p. 385; *Hume, Str. F.* v. p. 114 (1877); *Hume & Davison, Str. F.* vi. p. 444 (1878) [Mooleyit, Tenasserim]; *Hume, Str. F.* viii. p. 111 (1879); *Hume & Marsh. Game B.* ii. p. 75, pl. (1879); *Scully, Str. F.* viii. p. 349 (1879) [Nepal]; *Oates, B. Burmah*, ii. p. 328 (1883); *Grant, Ibis*, 1892, p. 393.

Perdix rufogularis, *Gray, List Gallinæ Brit. Mus.* p. 58 (1867); *id. Hand-l. B.* ii. p. 267, no. 9694 (1870).

Arborophila rufogularis, *Hume, Str. F.* ii. p. 450 (1874) [Kumaon].

Arboricola rufigularis, *Blyth & Walden, Mamm. & B. Burma*, p. 150 (1875); *Oates, ed. Hume's Nests & Eggs*, iii. p. 439 (1890).

Arborophila tickelli, *Hume, in Hume & Marsh. Game B.* ii. p. 78, note (1879) [Mooleyit].

Adult male and female. Resemble *A. intermedia*, but differ in having the feathers of the chin and throat rust-red, each with a terminal black spot as in the female of *A. torqueola*. The fore part of the neck uniform rust-red, or very nearly so, and bordered below by a black band. In most of the large series of

specimens from Mooleyit this black band is absent; but in some belonging to each sex it is represented by intermittent black spots at the extremities of some of the rust-red neck-feathers at the base of the neck, while in one female specimen it is as strongly developed as in any from Sikhim. The Tenasserim birds have received the name of *A. tickelli*, and are said to be "distinctly and constantly larger than the Himalayan"; but this is not the case, and it is impossible to consider them even subspecifically distinct.

Male. Total length 11 inches, wing 5·6, tail 2·3, tarsus 1·7.

Female. Total length 10·5 inches, wing 5·4, tail 2·1, tarsus 1·5.

Hab. Lower outer ranges of the Himalayas, from Kumaon through Nepal and Sikhim as far east as the Daphla Hills north of the Darrung Dist.; also occurs in the higher ranges of Tenasserim, on Mooleyit.

a, *b*. Ad. sk.	Almorah, Oct.	Hume Coll.
c–*e*. Ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
f. Ad. sk.	Nepal.	Gould Coll.
g. ♂ ad. sk.	Nepal Valley, June (*J. Scully*).	Hume Coll.
h–*r*. ♂ ♀ ad. sk.	Sikhim, Jan. to April (*L. Mandelli*).	Hume Coll.
s–*u*. ♂ ♀ ad. sk.	Native Sikhim, March, Dec. (*L. Mandelli*).	Hume Coll.
v–*x*. Ad. sk.	Mongphoo, Feb., March.	Hume Coll.
y–*d'*. Ad. sk.	Darjeeling.	Hume Coll.
e'. Ad. sk.	Darjeeling.	Gould Coll.
f'–*x'*. ♂ ♀ ad. sk.	Mooleyit, Jan., Feb. (*W. Davison*).	Hume Coll.

7. Arboricola gingica.

La Perdrix de Gingi, *Sonnerat, Voy. Ind. Orient.* ii. p. 167 (1782) [male only].

Gingi Partridge, *Lath. Gen. Syn.* ii. p. 773 (1783); *id. Gen. Hist.* viii. p. 278 (1823).

Tetrao gingicus, *Gmel. S. N.* i. p. 760 (1788).

Perdix gingica, *Lath. Ind. Orn.* ii. p. 648 (1790); *Bonn. Tabl. Encycl. Méth.* i. p. 212 (1791); *Temm. Pig. et Gall.* iii. pp. 410 & 733 (1815); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 197 (1817); *Steph. in Shaw's Gen. Zool.* xi. p. 351 (1819).

Gorget Partridge, *Lath. Gen. Hist.* viii. p. 302 (1823).

Perdix scutata, *Gray, in Griff. ed. Cur.* iii. p. 54 (1829).

Arboricola gingica, *Blyth, Ibis*, 1870, p. 174; *Grant, Ibis*, 1892, p. 395, pl. ix.

Upper parts as in *A. rufogularis*, but the head browner, with a broad white supercilium spotted with black; throat and sides of the neck pale ferruginous, with elongate black spots, not transversely oval as in *A. rufogularis*; lower part of the front of the neck black, forming a triangular patch, which is bordered below with a white semicircle, and this by a broader semicircle of deep maroon colour; lower parts ashy, passing to white on the middle of the belly, the feathers on the flanks being margined laterally with ferruginous.

Wing 5 inches. (*Blyth*, from specimen in the Leyden Museum marked "Coromandel.")

Hab. ? Philippines; ?? Island of Luzon.

8. Arboricola mandellii.

Arborophila mandellii, *Hume, Str. F.* ii. p. 449 (1874) [Bhotan Doars], iii. p. 262, pl. i. (1875).

Arboricola mandellii, *Hume & Marsh. Game B.* ii. p. 83, pl. (1879); *Hume, Str. F.* viii. p. 111 (1879); *Grant, Ibis*, 1892, p. 394.

Adult male and female. Differ from the male of *A. torqueola* in having the top of the head, lores, space in front of the eye, and nape dark chestnut; the back and sides of the neck rust-red, shading into chestnut towards the back, with a black spot at the extremity of most of the feathers; the feathers of the back, rump, and upper tail-coverts only fringed with blackish; the edges to the lesser and median wing-coverts and scapulars not so wide and much paler; a grey supercciliary stripe commencing above the middle of the eye and dividing the top of the head and nape from the back and sides of the neck; cheeks and ear-coverts rust-red, spotted with black; the chin, throat, and upper half of the fore neck uniform rust-red, bounded by a white and then a black band; the chest rich chestnut; and the middle of the breast and belly grey.

Male. Total length 11 inches, wing 5·4, tail 2·2, tarsus 1·6.

Female. Total length 10 inches, wing 5·1, tail 2, tarsus 1·5.

Hab. Lower hills of Bhotan and Native Sikhim.

a. Ad. sk.	Bhotan Doars, April (*L. Mandelli*).	Hume Coll.	(Type of the species.)
b–l. ♂ ♀ ad. sk.	Native Sikhim, Feb., March, April, Oct., Dec. (*L. Mandelli*).	Hume Coll.	

9. Arboricola javanica.

Javan Partridge, *Brown, Ill. Zool.* p. 40, pl. 17 (1776); *Lath. Gen. Syn.* ii. p. 775 (1783); *id. Gen. Hist.* viii. p. 308 (1823).

Tetrao javanicus, *Gmel. S. N.* i. p. 761 (1788).

Perdix javanica, *Lath. Ind. Orn.* ii. p. 651 (1790); *Bonn. Tabl. Encycl. Méth.* i. p. 211, pl. 96. fig. 1 (1791); *Temm. Pig. et Gall.* iii. pp. 404 & 732 (1815); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 225 (1817); *Steph. in Shaw's Gen. Zool.* xi. p. 355 (1819); *Temm. Pl. Col.* v. pl. 34 [no. 148] (1823); *Less. Traité d'Orn.* p. 506 (1831); *Gray, List Gallinæ Brit. Mus.* p. 59 (1867); *id. Hand-l. B.* ii. p. 268, no. 9702 (1870).

Rust-Bellied Partridge, *Lath. Gen. Hist.* viii. p. 298 (1823).

Arborophila javanica, *Gray, List Gall. B.* iii. p. 38 (1844); *Nicholson, Ibis*, 1882, p. 69 [Preanger Regencies].

Arboricola javanica, *Blyth, Ibis*, 1867, p. 159; *Grant, Ibis*, 1892, p. 396.

Peloperdix javanica, *Meyer, Vog.-Skel.* pt. xi. pl. ci. (1886).

Adult male and female. Top of the head reddish brown, shading

into rust-colour on the forehead and lores. A black band of feathers commences behind either nostril, and surrounding the eyes unite with one another at the back of the crown; thence the united bands pass down the middle of the back of the neck, dividing a rust-red patch of feathers on the nape, and are finally lost in the black band which surrounds the base of the neck. A second less regular black band crosses the base of the throat (in some specimens it is continued towards the chin) and bounds the rust-red patch on the nape, and passing widely down the side of the neck joins the one round the base of the neck. Chin, upper part of throat, cheeks, ear-coverts, and front of neck rust-coloured, the latter usually more or less spotted with black. Back, rump, and upper tail-coverts dark grey, barred and fringed with black. Wing-coverts and scapulars as in *A. torqueola*, but the chestnut margins to the latter are less defined and the subterminal black patches are wider. Chest grey. Breast, belly, sides, flanks, and under tail-coverts chestnut. Tail black, barred with grey. Iris dark grey; bill black; feet red.

Male. Total length 11 inches, wing 5·6, tail 2·2, tarsus 1·8.

Female. Total length 10 inches, wing 5·4, tail 2, tarsus 1·8.

A *quite young bird* has the scapulars reddish brown, each with a small white spot at the extremity of the shaft; the chin and throat are white and the chest brown; otherwise the plumage is much the same as that of the adult.

Hab. Mountains of Java.

a. Ad. st.	Java.	Zoological Soc. Coll.
b. ♀ ad. st.	Java.	Lidth-de-Jeude Coll.
c. Juv. st.	Java.	Purchased.
d, e. ♂ ♀ ad. sk.	Java.	Salvin-Godman Coll.
f. Ad. sk.	Java.	Tweeddale Coll.
g, h. Ad. sk.	Java.	Gould Coll.
i. Ad. sk.	Java.	India Museum [P.].
k. Ad. sk.	West Java (*A. R. Wallace*).	Tweeddale Coll.
l. ♂ ad. sk.	West Java.	A. R. Wallace, Esq. [C.].
m. Ad. skeleton.	Java.	Purchased.

10. Arboricola rubrirostris.

Peloperdix rubrirostris, *Salvad. Ann. Mus. Civ. Genov.* xiv. p. 251 (1879) [Mt. Singalan, Sumatra]; *Reich. & Schalow, J. f. O.* 1879, p. 310; *Snelleman, in Veth's Midden-Sumatra*, iv. p. 46, pl. iii. (1887); *Büttikofer, N. Leyd. Mus.* ix. p. 78 (1887) [Padang, W. Sumatra].

"Perdix vethi, *Schl.*," *fide Snelleman, in Veth's Midden-Sumatra*, iv. pp. 30, 31 (1887).

Arboricola rubrirostris, *Grant, Ibis*, 1892, p. 396.

Adult male. Head, throat, and neck black; a small white patch on the lores and chin; a line of white spots along each side of the crown, and also along the sides of the throat. The feathers giving this appearance are very curious, being naked shafts supporting a white plume at the extremity. Back and rest of upper parts rich olive-brown, barred and fringed with black, the terminal half of

the scapulars is paler olive-brown, with a wide terminal black bar. Primaries and their coverts brownish black; secondaries, their coverts, and some of the outer median coverts the same, but margined on the outer web with pale olive- or rufous-brown. Chest olive-brown, interspersed with similar white shaft-plumes to those of the crown and throat, and giving this part an irregular spotted appearance. Upper breast and sides of lower breast and belly white, with a large round black spot near the extremity of each feather; middle of lower breast and belly white; sides, flanks, and under tail-coverts black, with narrow wide-set white bars; thighs olive-brown, fringed with white. Tail olive-brown, barred and mottled with black. Iris brown; bill coral-red; legs and feet reddish brown. Total length 9·6 inches, wing 5·2, tail 1·7, tarsus 1·75.

Adult female. Differs only in having rather more white about the lores and chin. Total length 8·6 inches, wing 4·9, tail 1·6, tarsus 1·6.

Hab. Mountains of Sumatra.

a, *b*. ♂ ♀ ad. sk. Lolo, Sumatra, Dec. (*Carl Bock*). Tweeddale Coll.

11. Arboricola brunneopectus.

Arboricola brunneopectus, *Tick.*, *Blyth*, *J. As. Soc. Beng.* xxiv. p. 276 (1855) [Tenasserim Mts., 3000–5000 ft.]; *Hume*, *Str. F.* ii. p. 482 (1874); *Hume & Davison*, *Str. F.* vi. p. 443 (1878) [Kyouk-nyat, Mooleyit]; *Hume*, *Str. F.* viii. p. 111 (1879); *Hume & Marsh. Game B.* ii. p. 87, pl. (1879) [Tonghoo, Karen, and E. slopes of Pegu Hills]; *Bingham*, *Str. F.* ix. p. 195 (1880) [East of Dawna Range]; *Oates*, *Str. F.* x. p. 236 (1882) [Pegu]; *Grant*, *Ibis*, 1892, p. 397.

Arboricola brunneipectus, *Blyth*, *Ibis*, 1867, p. 159; *id. & Walden*, *Cat. Mamm. & B. Burm.* p. 150 (1875); *Oates*, *Birds Burmah*, ii. p. 325 (1883).

Arborophila brunneopectus, *Hume*, *Str. F.* ii. p. 449 (1874), iii. p. 174 (1875).

Arborophila brunneipectus, *Wald.* *Ibis*, 1875, p. 459.

Adult male and female. Forehead, lores, and wide superciliary stripes, which are continued backwards down the sides of the neck, buff; top of the head either olive-brown tipped with black, or black barred with brown towards the base *; middle of the back and sides of the neck black; feathers round the base of the neck buff-olive, with a black triangular spot at the extremity of each; back, rump, and upper tail-coverts olive-brown, fringed and barred with black; lesser and median wing-coverts and scapulars a mixture of reddish chestnut and pale olive, fringed at the extremity and often mottled more or less with black; many of the median wing-coverts with a large black patch in the middle, reaching from the base nearly to the extremity of the feathers, and most of the scapulars with a large

* The same peculiarly shaped feathers, with naked shafts and only a tuft of vanes at their extremity, already mentioned in the description of *A. rubrirostris*, are found in numbers among the feathers on the top of the head in this species, but owing to their being black are less conspicuous.

subterminal transverse black spot and tipped with chestnut. Primaries and their coverts blackish brown, mixed with rufous buff at the tips; inner secondaries the same, margined with reddish ochre on the outer web; outer secondaries and secondary coverts reddish ochre, the inner webs of the former more or less mottled with black, and of the latter mostly black. A black band commences behind the nostril, surrounds the eye, and passes over the ear-coverts into the black patch on the side of the neck. Chin, throat, cheeks, and ear-coverts pale buff; front of the neck with scattered lines of buff-coloured feathers with black extremities, between which can be seen the bright red skin of the throat. Chest brownish ochre, more or less barred with black at the base; breast paler; belly white, edged with brownish buff; sides and flank-feathers black and brownish buff, each with a large subterminal white blotch partially or wholly bordered with black. Under tail-coverts brownish buff, with a large black bar near the extremity. Tail-feathers olive-brown, mottled with black. Bill black; iris deep brown; orbital patch and gular skin (thinly covered with tracts of feathers) bright red; legs and feet red, varying from dull coral to pale bright red, pinker or even orange in young birds.

Male. Total length 11 inches, wing 5·6, tail 2·5, tarsus 1·7.

Female. Total length 10 inches, wing 5·4, tail 2·35, tarsus 1·6.

Hab. Karen, Tonghoo, and Eastern Pegu Hills as far south as the latitude of Tavoy, Tenasserim.

a, *b*. ♀ ad. sk.	Eastern Pegu Hills, April.	E. W. Oates, Esq. [C.].
c. ♀ ad. sk.	Eastern Pegu Hills, April (*E. W. Oates*).	Hume Coll.
d. ♂ ad. sk.	Tonghoo Hills, March (*R. G. W. R.*)	Tweeddale Coll.
e. ♂ ad. sk.	Tonghoo Dist.	E. W. Oates, Esq. [C.].
f, *g*. ♂ ad. sk.	Karen Hills, April (*R. G. W. R.*).	Tweeddale Coll.
h–*m*. ♂ ♀ ad. sk.	Thoungyah, Sept., Oct., Nov. (*J. Darling*).	Hume Coll.
n. ♀ ad. sk.	Thoungyeen River, Jan. (*C. T. Bingham*).	Hume Coll.
o. ♀ ad. sk.	Kyouk-nyat, Feb. (*W. Davison*).	Hume Coll.
p. ♀ ad. sk.	Myawaddy Road, Jan.	Capt. C. T. Bingham [C.].
q, *r*. ♂ ♀ ad. sk.	Mooleyit, Feb. (*W. Davison*).	Hume Coll.
s, *t* ♀ ad. sk.	Tyahoba, Tenasserim, April (*W. Limborg*).	Tweeddale Coll.

12. Arboricola hyperythra.

Bambusicola hyperythra, *Sharpe*, *Ibis*, 1879, p. 266 [Lawas R.]; *Reich. & Schalow*, *J. f. O.* 1879, p. 422; *Gould*, *B. Asia*, vi. pl. 71 (1879); *Everett*, *List B. Born.* p. 200 (1889).

Arboricola hyperythra, *Grant*, *Ibis*, 1892, p. 397.

Adult. Differs from *A. brunneopectus* chiefly in having the broad

superciliary stripe, ear-coverts, and cheeks dull ashy grey: the chin, throat, chest, and breast reddish chestnut. Total length 10·5 inches, wing 5·2, tail 2·2, tarsus 1·6.

Hab. Lawas River, North-west Borneo.

13. Arboricola erythrophrys.

Bambusicola hyperythra, *Sharpe* (*nec Sharpe*, 1879), *Ibis*, 1887, p. 454 [Kina Balu].
Bambusicola erythrophrys, *Sharpe*, *Ibis*, 1890, pp. 139, 284, 288, 289, pl. iv.; *Everett*, *List B. Born.* p. 200 (1889).
Arboricola erythrophrys, *Grant*, *Ibis*, 1892, p. 397.

Adult male and female. Resemble *A. hyperythra*, but distinguished by having the lores, superciliary stripes, and sides of the face bright rust-colour; and the chin and throat blackish in the male. Iris greenish brown; bill black; skin round the eye dull pink, that on the throat brighter; legs salmon-pink. Total length 10 inches, wing 5·8, tail 1·8, tarsus 1·85.

Hab. Kina Balu, North Borneo.

a. ♂ ad. sk. Kina Balu, Feb. A. H. Everett, Esq. [C.].

14. Arboricola orientalis.

Perdix orientalis, *Horsf. Trans. Linn. Soc.* xiii. p. 184 (1822) [Java].
Oriental Quail, *Lath. Gen. Hist.* viii. p. 322 (1823).
Perdix personata, *Horsf. Zool. Res.* pl. 61 (1824); *Gray, in Griff. Anim. Kingd.* iii. p. 53 (1829); *id. List Gallinæ Brit. Mus.* p. 59 (1867) [part].
Tropicoperdix personata, *Blyth, J. As. Soc. Beng.* xxviii. p. 415 (1859).
Arboricola personata, *Blyth, Ibis*, 1867, p. 159.
Arboricola orientalis, *Grant, Ibis*, 1892, p. 397.

Adult. Lores and superciliary stripe white; top of the head and back of the neck blackish brown; back, rump, and upper tail-coverts rich dark brown, each feather fringed with blackish at the extremity, those of the rump with a pale greyish-brown subterminal band. Lesser and outer median wing-coverts and scapulars dark brown, shading into dark olive-brown towards the extremity of the outer web; a black blotch is situated near the extremity of each feather, bordered externally with rufous, fringed with black. Inner median coverts the same, but widely bordered with dull orange-red. Primaries and their coverts dark brown; secondaries and their coverts the same, margined with rufous on the outer web, the outer secondaries are also widely tipped with dull orange-red fringed with black, like the inner median coverts, and have a small oblong black spot on the shaft near the extremity. A dark brown band commences behind the nostril, surrounds the eye, and passing above the ear-coverts is continued down the side of the neck. Chin, throat, cheeks, and ear-coverts white; the front of the neck, as in *A. brunneopectus*, is thinly covered with feathers of the same colour. Chest

and sides of breast brownish grey, each feather black or mottled with black towards the base; middle of breast and belly whitish; sides and flanks grey, somewhat irregularly and widely barred with white and black, and tinged and fringed with rufous buff at the extremity; under tail-coverts black, tipped with white. Tail dark brown. Iris pale reddish yellow; legs and feet the same; bill appears to have been reddish brown, and the orbital and gular skin scarlet. Total length 11 inches, wing 5·9, tail 2·5, tarsus 1·8.

Hab. Mountains of East Java.

a.	Ad. sk.	Province of Blambangan, East Java (*T. Horsfield*).	India Museum [P.]. (Type of the species.)

15. Arboricola sumatrana.

Perdix personata, *Gray* (*nec Horsf.*), *List Gallinæ Brit. Mus.* p. 59 (1867) [part., Sumatra]; *id. Hand-l. B.* ii. p. 268, no. 9703 (1870).

Arborophila personata, *Nicholson, Ibis*, 1883, p. 255 [Central Sumatra, 3000 ft.].

Arborophila sumatrana, *Grant, Ann. Mag. N. H.* (6) viii. p. 297 (1891).

Arboricola sumatrana, *Grant, Ibis*, 1892, p. 398.

Adult. Resembles *A. orientalis*, but differs in having the lores pale brownish; no white superciliary stripe; the top of the head golden brown tipped with dark brown; the back and upper parts golden brown, fringed and strongly barred with black; the chest and breast uniform grey, shading into white on the belly; the side and flank-feathers with broad regular three-fold bands of black, white, and black at the extremity; the under tail-coverts white, black towards the base, and the tail-feathers dark brown clouded with golden brown. (*Female*) Iris dark brown; bill black; legs and feet red; wattle round eye scarlet; skin of neck scarlet (below feathers). Total length 11 inches, wing 5·8, tail 2·2, tarsus 1·8.

Hab. Mountains of Central Sumatra, 3000 feet.

a.	Ad. sk.	Sumatra.	Zool. Soc. Coll. (Type of the species.)

16. Arboricola chloropus.

Tropicoperdix chloropus, *Tick., Blyth, J. As. Soc. B.* xxviii. p. 415 (1859).

Arboricola chloropus, *Tick. J. As. Soc. B.* xxviii. p. 453 (1859) [Amherst]; *Blyth, Ibis*, 1867, p. 160; *Hume, Str. F.* ii. p. 482 (1874) [Pahpoon]; *Blyth & Walden, Cat. Mamm. & B. Burm.* p. 150 (1875) [Zummee R.]; *Hume & Davison, Str. F.* vi. p. 444 (1878) [N. & Central Tenasserim]; *Hume, Str. F.* viii. p. 111 (1879); *Hume & Marsh. Game B.* ii. p. 91, pl. (1879) [Tonghoo]; *Bingham, Str. F.* ix. p. 195 (1880) [Thoungyeen Valley]; *Oates, Str. F.* x. p. 236 (1882) [Pegu]; *id. B. Burmah*, ii. p. 326 (1883) [E. slopes of Pegu Hills, Cochin China]; *Grant, Ibis*, 1892, p. 398.

Phœnicoperdix chloropus, *Blyth, fide Hartlaub, Arch. f. Naturges.* xxvi. pt. ii. p. 99 (1861); *Hume, Str. F.* ii. p. 482 (1874), & vi. p. 447 (1878) [Moulmein].

Arborophila chloropus, *Hume, Str. F.* ii. p. 449 (1874).
Peloperdix chloropus, *Hume, Str. F.* iii. p. 176 (1878).

Adult male and female. Top of the head, middle of the nape, and back of the neck rich brown; upper back the same, each feather with a submarginal black line and irregular black bars either roughly following the shape of the feather or crossing transversely. Lower back, rump, and upper tail-coverts also rich brown, fringed, barred, and dotted with black and rufous or buff; most of the wing-coverts and scapulars the same, with a rather large buff or buff and rust-coloured patch near the extremity, and an oblong buff spot or streak at the extremity of the shaft. Primaries and their coverts blackish brown, edged with rufous buff near the extremity of the outer web. Inner secondaries the same, margined and mottled on the outer web with rufous buff; outer secondaries like the scapulars. Feathers of the lores and superciliary stripe white, edged with black, or with one web black, and continued backwards in a buff black-edged band bordering the crown and brown middle of the nape. Chin white; throat and sides of face white, with a black spot at the extremity of each feather; front and sides of the neck rust-colour and similarly spotted. Chest brown, barred with black, some of the feathers shading into brownish buff towards the extremities. (In one specimen the upper half of the chest is uniform brown and not barred with black.) Middle of the breast rust-red, shading into pale buff or white on the belly; sides and flanks and under tail-coverts buff and brownish, irregularly marked and barred with black. A large hidden patch of pure white downy feathers on either side. Tail reddish brown, irregularly barred and mottled with black. Iris dark hazel-brown; bill dusky red at base, remainder greenish; eyelids and orbital skin purplish; legs and feet pale green.

Male. Total length 12 inches, wing 6·2, tail 2·9, tarsus 1·6.

Female. Total length 10·3 inches, wing 5·9, tail 2·6, tarsus 1·5.

Hab. From the hills north of Tonghoo and the Pegu Yoma southwards along the lower slopes of the Tenasserim Hills as far south as the latitude of Tavoy. Also recorded from Cochin China.

a, b. ♂ ♀ ad. sk.	Eastern Pegu Hills, April.	E. W. Oates, Esq. [C.].
c. ♀ ad. sk.	Eastern Pegu Hills, April (*E. W. Oates*).	Hume Coll.
d. ♂ ad. sk.	Kyouknyat, Salween Dist., Jan. (*W. Davison*).	Hume Coll.
e–h. ♂ ♀ ad. sk.	Pahpoon, Jan. (*W. Davison*).	Hume Coll.
i. ♂ ad. sk.	Thoungyah, Nov. (*J. Darling*).	Hume Coll.
k. ♀ ad. sk.	Thoungyeen River, Jan. (*C. T. Bingham*).	Hume Coll.
l, m. Ad. sk.	Thoungyeen Valley.	Capt. C. T. Bingham [C.].
n. ♂ ad. sk.	Near Myawadee, Jan. (*W. Davison*).	Hume Coll.
o, p. ♂ ad. sk.	Meetan, Feb. (*W. Davison*).	Hume Coll.
q. ♂ ad. sk.	Tavoy, Dec. (*W. Davison*).	Hume Coll.

17. Arboricola charltoni.

Perdix charltonii, *Eyton, Ann. & Mag. N. H.* xvi. p. 230 (1845) [Malacca]; *Gray, List Gallinæ Brit. Mus.* p. 58 (1867); *id. Hand-l. B.* ii. p. 268, no. 9701 (1870).

Francolinus charltoni, *Gray, Gen. B.* iii. p. 505 (1846).

Arboricola (?) charltoni, *Blyth, Cat. B. Mus. As. Soc.* p. 253 (1849) [Penang].

Tropicoperdix charltoni, *Blyth, J. As. Soc. Beng.* xxviii. p. 415 (1859).

Arboricola charltoni, *Blyth, Ibis*, 1867, pp. 160, 313; *Hume & Davison, Str. F.* vi. p. 445 (1878); *Hume & Marsh. Game B.* ii. p. 93, pl. (1879); *Hume, Str. F.* viii. p. 111 (1879); *Grant, Ibis*, 1892, p. 398.

Peloperdix charltoni, *Blyth, fide Gray, List Gallinæ Brit. Mus.* p. 58 (1867); *Oustal. Bull. Soc. Philom.* (7) vi. p. 259 (1882).

Arborophila charltoni, *Hume, Str. F.* ii. p. 450 (1874); *Nicholson, Ibis*, 1883, p. 89 [Segilind R., N.E. Borneo]; *Everett, List B. Borneo*, p. 199 (1889) [N. Borneo]; *Sharpe, Ibis*, 1890, pp. 140, 284, 287 [Benkoka R. & Sandakan].

Arboricola pyrrhogaster, *Reichenb., Blyth & Walden, Cat. Mamm. & B. Burma*, p. 151 (1875) [Prov. Wellesley].

Arboriphila charltoni, *Elliot, Auk*, viii. p. 15 (1891) [Sapagaya R., N.E. Borneo].

Adult male and female. Differ from *A. chloropus* in having all the feathers of the back, rump, and upper tail-coverts vermiculated and irregularly barred with black, most of the feathers with irregular buff spots or bars; the ear-coverts uniform rufous or rufous chestnut; the sides of the neck and a ring round the base black; the front of the neck white, spotted with black: the upper half of chest chestnut, the lower half, sides, and flanks buff, widely barred with blackish brown; these bars are rather less sharply defined on the lower chest of the female. Iris brown; bill black; feet dull yellowish green.

Male. Total length 11 inches, wing 6·3, tail 2·5, tarsus 1·6.

Female. Total length 10 inches, wing 6, tail 2·4, tarsus 1·5.

Hab. The Malay Peninsula from Pinang southwards, Sumatra and N. Borneo. Reported also from Bankok in Siam and the South Tenasserim Hills.

a f. Ad. sk.	Pinang (*Dr. Cantor*).	India Museum [P.].
g, h. Ad. sk.	Malacca.	Major A. Charlton [P.]. (Types of the species.)
i. Ad. sk.	Malacca.	India Museum [P.].
k. Ad. sk.	Malacca.	Gould Coll.
l. Ad. sk.	Elopura, N. Borneo, April (*W. B. Pryer*).	Dr. R. B. Sharpe [P.].

14. HÆMATORTYX.

	Type.
Hæmatortyx, *Sharpe, Ibis*, 1879, p. 266	H. sanguiniceps.

Tail composed of 12 feathers, short, rounded, and less than half the length of the wing.

1st primary equal in length to the 10th; 5th slightly longest.

Tarsus longer than the middle toe and claw, and armed with

three pairs of spurs in the male (*fide Everett in litt.*), none in the female: nail on hallux small but well developed.

Range. Northern Borneo.

1. Hæmatortyx sanguiniceps.

Hæmatortyx sanguiniceps, *Sharpe, Ibis*, 1879, p. 266 [Lawas Mts.]; *Reich. & Schalow, J. f. O.* 1879, p. 423; *Gould, B. Asia*, vi. pl. 70 (1879); *Everett, List B. Born.* p. 200 (1889); *Hose, Ibis*, 1893, p. 423 [Mt. Dulit].

Adult female. General colour of the plumage blackish brown; top of the head and nape deep crimson, lighter on the sides of the head and cheeks; chin and throat pale rufous, washed with crimson; fore part of neck and chest reddish chestnut; longer under tail-coverts widely tipped with brilliant crimson.

In an *apparently not quite adult* example most of the wing-coverts have a rust-coloured spot at the extremity of the shaft, and some of the feathers on the middle of the breast are mottled with reddish chestnut.

Total length 10·5 inches, wing 6, tail 2·8, tarsus 1·9, middle toe and claw 1·6.

Hab. Lawas Mts. and Mt. Dulit, in Sarawak.

a. ♀ vix ad. sk.	Mt. Dulit, Sarawak, 5000 ft., November.	C. Hose, Esq. [C.].

15. CALOPERDIX.

Type.

Caloperdix, *Blyth, Ibis*, 1867, p. 160 ..... C. oculea.

Tail of 14 feathers, less than half the length of the wing.

1st primary equal to the 10th, 4th to the 6th, subequal and longest.

Tarsi longer than the middle toe and claw, and armed in the male with one or more pairs of spurs; hallux with rudimentary nail.

Range. S. Tenasserim, Malay Peninsula, Sumatra, Java, Borneo.

Key to the Species.

A. Black feathers of mantle shading gradually into the rufous-chestnut nape.
  a. Feathers of mantle ornamented with white concentric bands; chest not mottled and barred with black ..... *oculea*, p. 222.
  b. Feathers of mantle with irregular pale yellow transverse bands; basal half of chest-feathers mottled and barred with black ..... *sumatrana*, p. 224.
B. Black feathers of mantle sharply defined from dark chestnut nape, ornamented with narrow concentric white lines ..... *borneensis*, p. 224.

1. Caloperdix oculea.

Perdix oculea, *Temm. Pig. et Gall.* iii. pp. 408 & 732 (1815); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 227 (1817); *Steph. in Shaw's Gen. Zool.* xi. p. 353 (1819); *Vieill. Tabl. Encycl. Méth.* i. p. 367

(1823); *Gray, in Griff. Anim. Kingd.* iii. p. 53 (1829); *id. Ill. Ind. Zool.* i. pl. 58 (1830–32).
Eyed Partridge, *Lath. Gen. Hist.* viii. p. 301 (1823).
Cryptonyx ocellatus, *Vig. Zool. Journ.* iv. p. 349 (1829).
Rollulus ocellatus, *Gray, List of Gall.* iii. p. 43 (1844); *id. Gen. B.* iii. p. 507 (1846).
Rollulus (?) ocellatus, *Blyth, Cat. B. Mus. As. Soc.* p. 253 (1849) [Tenasserim].
Galloperdix oculea, *Bonap. C. R.* xlii. p. 882 (1856).
Rollulus oculeus, *Gray, List Gallinæ Brit. Mus.* p. 65 (1867); *id. Hand-l. B.* ii. p. 269 (1870) [*nec* Sumatra].
Caloperdix oculea, *Blyth, Ibis*, 1867, p. 160 [part., Mergui]; *Salvad. Ucc. Born.* p. 310 (1874) [part., Tenasserim & Malacca]; *Hume, Str. F.* iii. p. 325 (1875) [Bankasoon]; *Hume & Davison, Str. F.* vi. p. 449 (1878) [Palaw-ton-ton, Malawoon]; *Oates, B. Burmah*, ii. p. 329 (1883) [part., Malay Pen.].
Caloperdix ocellata, *Blyth & Wald. Cat. Mamm. & B. Burm.* p. 151 (1875) [part., Mergui & Wellesley Prov.].
Caloperdix oculeus, *Hume, Str. F.* viii. p. 111 (1879); *Hume & Marsh. Game B.* ii. p. 101, pl. (1879) [Moulmein]; *Hume, Str. F.* ix. p. 121 (1880) [Kopah].
Galloperdix oculeus, *Hume, Str. F.* viii. p. 69 (1879) [Malacca].
Francolinus oculeus, *Grant, Ibis*, 1892, p. 50 [part., Tenasserim, Malacca].

Adult male and female. Top of the head bright chestnut, shading into clear rufous chestnut on the lores and back of the neck. Upper back black, each feather with a white submarginal line, within which is a second white line, either following the shape of the feather, or merely represented by a white shaft-stripe; lower back, rump, and upper tail-coverts black, each feather with a bright rust-coloured submarginal line widened and pointed towards the extremity of the feather. Lesser and median wing-coverts and scapulars olive-brown, with a round black spot at the extremity of the feathers. Primaries and their coverts blackish brown, with light rufous-buff margins; secondaries the same, with the outer half of the outer web margined and mottled with rufous buff. A short black stripe passing from behind the eye across the top of the ear-coverts; rest of the face, chin, and throat pale rufous buff. Neck, chest, and rest of underparts clear rufous chestnut; some of the flank-feathers and under tail-coverts with a round black spot near the extremity; sides black, barred with white or buff. Tail black, the two middle pairs of feathers with rufous-buff bands irregularly following the shape of the feather. Male with a pair of spurs, or sometimes two situated close together. Iris deep brown; bill black; legs and feet pale dirty green.

Male. Total length 11·8 inches, wing 5·7, tail 2·5, tarsus 1·8.
Female. Total length 10·7 inches, wing 5·3, tail 2·3, tarsus 1·6.
Hab. S. Tenasserim and Malay Peninsula.

a. ♀ nr. ad. st.	[India.]	India Museum [P.].
b. ♂ ad. sk.	South Tenasserim, Jan.	E. W. Oates, Esq. [C.].
c, d. ♂ ♀ ad. sk.	Bankasoon, March, April (*W. Davison*).	Hume Coll.
e. ♀ ad. sk.	Coppah, Oct. (*J. Darling*).	Hume Coll.
f. ♂ ad. sk.	Keddah, Malay Peninsula.	India Museum [P.].

g. ♂ ad. sk.	Purlis (*Dr. Cantor*).	India Museum [P.].
h. ♀ ad. sk.	Malacca (*Dr. A. C. Maingay*).	Tweeddale Coll.
i. ♀ ad. sk.	Malacca.	Tweeddale Coll.
k. ♂ ad. sk.	Malacca.	Capt. Stackhouse Pinwill [P.].
l. ♀ ad. sk.	Malacca.	Gould Coll.

Subsp. *a.* **Caloperdix sumatrana.**

Tetrao ocellatus, *Raffles* (*nec Vig.*), *Tr. Linn. Soc.* xiii. p. 322 (1822) [Sumatra].
Malacca Partridge, *Lath. Gen. Hist.* viii. p. 334 (1823).
Caloperdix oculea, *Blyth* (*nec Temm.*), *Ibis*, 1867, p. 160 [part., Sumatra]; *Salvad. Ucc. Born.* p. 310 (1874) [part., Sumatra]; *Beccari, Ann. Mus. Genov.* xiii. p. 455 (1878); *Salvad. Ann. Mus. Genov.* xiv. p. 252 (1879) [Kaju tanam]; *Nichols. Ibis*, 1883, p. 255 [Volcano of Kaba]; *Büttikofer, N. Leyd. Mus.* ix. p. 78 (1887) [Padang, W. Sumatra].
Francolinus oculeus, *Grant, Ibis*, 1892, p. 50 [part., Sumatra, Java].
Caloperdix sumatrana, *Grant, Bull. Orn. C.* no. ii. (Nov. 1st, 1892), p. v, and *Ibis*, 1893, p. 118.

Specimens from Sumatra and Java are on the whole less brightly coloured than Malayan birds, especially on the underparts; and the chest and sides of the breast even in perfectly adult specimens have the basal half of the feathers irregularly barred and marked with black; the black feathers of the mantle, instead of being ornamented with a white submarginal band, are irregularly barred with yellowish white.

Hab. Sumatra and Java,

a, b. ♂ ♀ ad. sk.	Siedjoendjoeng, Sumatra, Oct. (*C. Bock*).	Tweeddale Coll. (Types of the subspecies.)
c. ♀ ad. sk.	Mt. Sago, Sumatra, Sept. (*C. Bock*).	Tweeddale Coll.
d. ♂ nr. ad. sk.	Sumatra (*A. R. Wallace*).	Tweeddale Coll.
e. ♀ ad. st.	Sumatra.	Purchased.
f, g. ♂ imm. sk.	Sumatra.	Wallace & Zool. Soc. Colls.
h, i. ♂ ad. sk.	Java (*Horsfield*).	India Museum [P.]

2. Caloperdix borneensis.

Caloperdix oculea, *Salvad.* (*nec Temm.*) *Ucc. Born.* p. 310 (1874) [part., Borneo].
Francolinus oculeus, *Grant, Ibis*, 1892, p. 50 [part., Borneo].
Caloperdix borneensis, *Grant, Bull. Orn. C.* no. ii. (Nov. 1st, 1892), p. v, and *Ibis*, 1893, p. 117 [Mt. Dulit]; *Hose, Ibis*, 1893, p. 423.

Adult male. Differs from *C. oculea* in having the chin and throat darker and more rufous chestnut; while the mantle is very black, ornamented with narrower and more regular concentric white lines, and sharply defined from the dark chestnut of the top of the head and nape. Total length 10·4 inches, wing 5·3, tail 2·2, tarsus 1·75.

Hab. Mount Dulit, Sarawak, N. Borneo.

a. ♂ ad. sk.	Mt. Dulit, Sarawak, 5000 feet, May.	C. Hose, Esq. [C.]. (Type of the species.)

16. ROLLULUS.

	Type.
Rollulus, *Bonn. Tabl. Encycl. Méth.* i. introd. p. xciii (1790)	R. roulroul.
Cryptonyx, *Temm. Pig. et Gall.* iii. pp. 526, 745 (1815)	R. roulroul.
Liponyx, *Vieill. Analyse*, p. 51 (1816)	R. roulroul.

A tuft of long hair-like bristles on the middle of the forehead.

A long full hairy crest (in the male).

Tail composed of 12 feathers, short, soft, rounded, about two-fifths of the length of the wing.

Tarsus longer than the middle toe and claw; the latter moderate, rather straight; claw on the hallux quite rudimentary.

1st primary equal in length to the 10th, 5th slightly longest.

Range. South Tenasserim, Malay Peninsula, Sumatra, Java, Borneo.

1. Rollulus roulroul.

Roulroul de Malacca, *Sonn. Voy. Ind. Orient.* ii. p. 174, pl. 100 (1782).

Green Partridge, *Lath. Gen. Syn.* iv. p. 777, pl. 67 (1783).

Phasianus roulroul, *Scop. Del. Flor. et Faun. Insubr.* ii. p. 93 (1786).

Phasianus cristatus, *Sparrm. Mus. Carls.* fasc. iii. pl. 64 (1788).

Columba cristata, *Gm. S. N.* i. pt. ii. p. 774 (1788); *Lath. Ind. Orn.* ii. p. 596 (1790).

Tetrao viridis, *Gm. S. N.* i. pt. ii. p. 761 (1788); *Raffl. Tr. Linn. Soc.* xiii. p. 322 (1822) [Sumatra].

Perdix viridis, *Lath. Ind. Orn.* ii. p. 650 (1790).

Coturnix viridis, *Bonn. Tabl. Encycl. Méth.* i. p. 219, pl. 95. fig. 4 (1791).

Tetrao porphyrio, *Shaw & Nodd. Nat. Misc.* iii. pl. 84.

Perdix coronata, *Lath. Suppl. Ind. Orn.* p. 62 (1801).

Crowned Partridge, *Lath. Gen. Syn. Suppl.* ii. p. 278 (1802); *id. Gen. Hist.* viii. p. 331, pls. cxxx., cxxxi. (1823).

Cryptonyx coronatus, *Temm. Pig. et Gall.* iii. pp. 526, 745 (1815); *Temm. Pl. Col.* v. pls. 43 & 44 [nos. 350 & 351] (1825); *Less. Traité d'Orn.* p. 499, pl. 86. fig. 1 (1831); *Müll. Verhandl. Land- en Volkenk.* p. 395 (1839–44); *Schinz, Nat. Vögel*, p. 154, pl. 75 (1853); *Schl. Handl. Dierk.* i. p. 395 (1857).

Cryptonyx cristatus, *Vig. Zool. Journ.* iv. p. 348 (1829); *Cuv. Reg. Anim., Ois.* pl. 62. fig. 2 (1836–46).

Cryptonix coronatus, *Schinz, Nat. Abbild., Vög.* p. 267 (1833); *Jard. Nat. Lib., Orn.* iv. p. 187, pl. xxvi. (1834).

Liponyx cristata, *Vieill. Gall. Ois.* p. 35, pl. 210 (1834); *Fitzinger, Atl. Nat. Vög.* fig. 239 (1864).

Rollulus cristatus, *Gray, List Gen. B.* p. 80 (1841); *Blyth, Cat. B. Mus. As. Soc.* p. 253 (1849); *Bonap. C. R.* xlii. p. 876 (1856); *Gray, List Gallinæ Brit. Mus.* p. 64 (1867); *Blyth & Walden, Cat. Mamm. & B. Burma*, p. 151 (1875).

Rollulus roulroul, *Gray, List Gall. B.* iii. p. 42 (1844); *id. Gen. B.* p. 507 (1846); *id. Hand-l. B.* ii. p. 269, no. 9726 (1870); *Wald. Ibis*, 1872, p. 382; *Salvad. Ucc. Borneo*, p. 308 (1874) [Sarawak]; *Hume, Str. F.* iii. p. 324 (1875) [S. Tenasserim]; *Sharpe, Ibis*, 1876, p. 51; *Tweedd. Ibis*, 1877, p. 322; *Hume & Davison, Str. F.* vi. p. 448 (1878) [Palaw-ton-ton, Bankasoon, Malawoon]; *Beec. Ann. Mus. Civ. Genov.* xiii. p. 455 (1878); *Salvad. l. c.* xiv. p. 252

(1879); *Sharpe, Ibis*, 1879, p. 270; *Hume, Str. F.* viii. pp. 69, 111 (1879) [Malacca, Johore, Wellesley Prov.]; *Hume & Marsh. Game B.* ii. p. 103, pl. (1879) [Western Siam]; *Sharpe, P. Z. S.* 1881, p. 800; *Kelham, Ibis*, 1882, p. 4; *Nicholson, Ibis*, 1882, p. 65, & 1883, p. 90; *Blas. Verh. Ges. Wien*, xxxiii. p. 69 (1883); *Oates, B. Burmah*, ii. p. 330 (1883); *Meyer, Vog.-Skelet.* pl. lxxxv. (1885); *Büttikofer, N. Leyd. Mus.* ix. p. 78 (1887) [Padang, W. Sumatra]; *Everett, List B. Borneo*, p. 200 (1889) [Borneo]; *Sharpe, Ibis*, 1890, pp. 140, 284; *Hose, Ibis*, 1893, p. 423 [Mt. Dulit & Baram].

Hemipodius nigrifrons, *Drapiez, Dict. Sci. Nat.* x. p. 562, pl. 45. fig. 2 (1845).

Rollulus coronatus, *Jerd. B. Ind.* ii. p. 580 (1864); *v. Pelz. Ibis*, 1873, p. 36.

Rollulus rulrul, *Brüggem. Abh. nat. Ver. Brem.* v. p. 463 (1877).

Cryptonyx roulroul, *Snelleman, in Veth's Midden-Sumatra*, iv. p. 46 (1887).

Rolulus roulroul, *Elliot, Auk*, viii. p. 15 (1891) [N.E. Borneo].

Adult male. Fore part of the head, superciliary stripes, lores, cheeks, ear-coverts, chin, throat, and neck black. A tuft of long stiff, black, hair-like shafts situated in the middle of the forehead. A white band across the top of the head between the eyes separates the black fore part from the long hairy maroon crest which covers the hinder part of the head. Back of the neck, back, rump, and upper tail-coverts rich green glossed with steel-blue. Primaries and secondaries and their coverts dark brown, and, the primaries especially, mottled on the outer web with rufous buff; scapulars and rest of the wing-coverts maroon, glossed with purple and blue. Rest of the underparts black, the chest and breast glossed with blue. Tail and the longer upper tail-coverts black. Bill black, scarlet at the base, naked skin round the eye, legs, and feet scarlet. Iris slaty grey. Total length 10·8 inches, wing 5·5, tail 2·3, tarsus 1·7.

Adult female. The whole head is blackish grey; the frontal tuft of bristles is well developed as in the male, but the occipital crest is only moderate. The neck, back, rump, upper tail-coverts, chest, and breast are bright grass-green, shading into greyish green on the belly and under tail-coverts. Primaries, secondaries, and their coverts as in the male; scapulars, lesser and median wing-coverts chestnut, edged with maroon slightly glossed with purple. Tail black. The bill is black and the iris is brown, otherwise the soft parts are like those of the male. Total length 10·5 inches, wing 5·2, tail 2·3, tarsus 1·6.

An *immature female* resembles the adult, but the extremities of the scapulars and wing-coverts are tipped with rufous buff.

Hab. Malay Peninsula from South Tenasserim southwards, extending into Siam, Sumatra, Java, and Borneo.

a, b. ♂ ad. sk.	Near Palawtonton, S. Tenasserim, Dec. (*W. Davison*).	Hume Coll.
c–n. ♂ ♀ ad. sk.	Baukasoon, March, April, May, & Dec. (*W. Davison*).	Hume Coll.
o, p. ♂ ♀ ad. sk.	Malawoon, Feb., April (*W. Davison*).	Hume Coll.

q. ♀ ad. sk.	Malawoon, Jan.	E. W. Oates, Esq. [C.].
r. ♂ ad. sk.	S. Tenasserim, Jan.	E. W. Oates, Esq. [C.].
s–v. ♂ ♀ ad. sk.	Province Wellesley (*Dr. Cantor*).	India Museum [P.].
w, *x*. ♂ ♀ ad. sk.	Selangore, Dec. (*W. Davison*).	Hume Coll.
y–d'. ♀ ad. et imm. sk.	Malacca, Jan., July, Aug.	Hume Coll.
e'–i'. ♂ ♀ ad. sk.	Malacca, Aug. (*R. G. W. R.*).	Tweeddale Coll.
k'–m'. ♂ ♀ ad. sk.	Malacca.	W. Harvey, Esq., & Capt. S. Pinwill [P.].
n'. ♀ nr. ad. sk.	Malacca.	A. R. Wallace, Esq. [C.].
o'–q'. ♂ ♀ ad. sk.	Malacca (*Dr. Cantor*).	India Museum [P.].
r', *s'*. ♂ ♀ ad. sk.	Johore, March, Aug. (*W. Davison*).	Hume Coll.
t'. ♂ ad. sk.	Sumatra.	A. R. Wallace, Esq. [C.].
u'–w'. ♂ ♀ ad. sk.	Siedjoendjoeng, Sumatra, Sept., Oct. (*C. Boek*).	Tweeddale Coll.
x'. ♂ ad. sk.	Lampong, S.E. Sumatra (*E. C. Buxton*).	Tweeddale Coll.
y'. ♂ ad. sk.	Java.	
z', *a''*. ♀ ad. et juv. st.	Java.	Purchased.
b''–d''. ♂ ♀ ad. sk.	Sarawak, Borneo.	Rajah Brooke [P.].
e''. ♂ ad. st.	Sarawak.	Sir Hugh Low [C.].
f'', *g''*. ♂ ad. sk.	Sarawak (*A. R. Wallace*).	Tweeddale & Gould Colls.
h''–k''. ♂ ad., imm. et pull. sk.	Mt. Dulit, Sarawak, June, Aug.	C. Hose, Esq. [C.].
l''. Juv. sk.	Baram, Sarawak, Sept.	A. H. Everett, Esq. [C.].
m''–o''. ♂ ♀ ad. sk.	Marup (*A. H. Everett*).	Tweeddale Coll.
p''. ♀ imm. sk.	Sandakan (*W. B. Pryer*).	Dr. R. B. Sharpe. [P.].
q''. Pull. st.		A. Wiener, Esq. [P.].
r''. Skeleton.		Salvin-Godman Coll.
s'', *t''*. Skeletons.	Sarawak.	A. H. Everett, Esq. [C.].
u''. Skeleton.	Indian Archipelago.	Purchased.

17. MELANOPERDIX.

Melanoperdix, *Jerd. B. Ind.* iii. p. 580 (1864)..... Type. M. nigra.

Tail short, soft, and rounded, with 12 tail-feathers only, more than half the length of the wing.

1st primary equal in length to the 10th, 5th slightly longest.

Bill short, thick and deep.

Tarsus long, much longer than middle toe and claw; the latter short and curved; hallux with a rudimentary claw.

Range. Malay Peninsula, Sumatra, Borneo.

1. Melanoperdix nigra.

? Perdix cambaiensis, *Lath. Ind. Orn.* ii. p. 655 (1790) ? [♀ juv.].
? Cambaian Partridge, *Lath. Gen. Syn. Suppl.* ii. p. 282 (1802); *id. Gen. Hist.* viii. p. 334 (1823).
? Cryptonyx rufus, *Temm. Pig. et Gall.* iii. pp. 534, 747 (1815).
? Cryptonyx cambaiensis, *Vigors, Zool. Journ.* iv. p. 350 (1829).
Cryptonyx niger, *Vig. Zool. Journ.* iv. p. 349 (1829); *Bonap. C. R.* xlii. p. 876 (1856).
Cryptonyx ferrugineus, *Vig. Zool. Journ.* iv. p. 349 (1829).
Cryptonyx ferruginous, *Gray, Ill. Ind. Zool.* ii. pl. 45. fig. 1 (1833–34).
Cryptonyx dussumieri, *Less. Bélang. Voy. Ind.* p. 275, pl. vii. (1834); *Schl. Handl. Dierk.* i. p. 393 (1857).
Perdix æruginosus, *Eyton, P. Z. S.* 1839, p. 106.
Rollulus niger, *Gray, Gen. B.* iii. p. 507 (1846); *Strickl. P. Z. S.* 1846, p. 105.
Melanoperdix nigra, *Jerd. B. Ind.* iii. p. 580 (1864); *Salvad. Ucc. Borneo*, p. 309 (1874); *Blas. Verh. Ges. Wien*, xxxiii. p. 70 (1883) [Lihong Bahaja]; *Grabowsky, Ornis*, 1885, p. 160; *Everett, List B. Borneo*, p. 199 (1889) [Borneo]; *Hose, Ibis*, 1893, p. 423 [Baram Dist.].
Arboricola ? æruginosa, *Blyth, Ibis*, 1867, p. 159.

Adult male. Whole plumage uniform glossy black, except the primaries and their coverts which are brownish black. Iris dark brown. Bill black. Legs and feet pale shining slate-colour. Total length 10·5 inches, wing 5·5, tail 3·3, tarsus 1·8.

Immature male has the upper and underparts mingled with rufous plumage resembling that of the female adult, and the scapulars, wing-coverts, and secondaries have a buff-coloured spot at the extremity of the shaft.

Adult female. General colour above chestnut, darkest on the head and becoming brighter on the lower back and rump, more or less vermiculated with black; scapulars rufous towards the extremity, each with a subterminal transverse black band. Primaries and their coverts brown; secondaries the same, mottled with rufous on the edge of the outer web. Chin and centre of throat whitish, most of the feathers rufous towards the margin. Chest dark chestnut, shading into rufous on the breast, sides, flanks, and under tail-coverts, the three latter are also more or less barred and mottled with black; belly whitish in the centre, shading into dirty buff on the sides. Total length 10·5 inches, wing 5·3, tail 2·5, tarsus 1·8.

Hab. Malay Peninsula, from Province Wellesley southwards, Sumatra, and Borneo.

a–e. ♂ ♀ ad. sk.	Province Wellesley, Malay Peninsula (*Dr. Cantor*).	India Museum [P.].
f–i. ♂ ♀ ad. sk.	Malacca, Aug.	Hume Coll.
k–p. ♂ ♀ ad. et ♂ imm. sk.	Malacca (*Dr. A. C. Maingay*).	Tweeddale Coll.
q. ♂ ad. sk.	Malacca, Aug. (*R. G. W. R.*).	Tweeddale Coll.
r–u. ♂ ♀ ad. sk.	Malacca (*Dr. Cantor*).	India Museum [P.].
v–x. ♂ ♀ ad. sk.	Malacca.	Gould Coll.
y, z. ♀ ad. sk.	Malacca.	Capt. Stackhouse Pinwill [P.].
a′. ♀ ad. sk.	Rembaw, Malay Peninsula.	W. Davison, Esq. [P.].
b′, c′. ♂ ♀ ad. st.	Singapore.	Purchased.

d', *e'*. ♂ imm. et ♀ ad. sk.	Sumatra (*Sir T. Raffles*).	Zool. Soc. Coll.
f', *g'*. ♂ ♀ ad. sk.	Sarawak, Borneo.	Rajah Brooke [P.].
h', *i'*. ♂ ♀ ad. sk.	Sarawak.	A. R. Wallace, Esq. [C.].
k'. ♀ ad. sk.	Tegora, Sarawak, Oct. (*H. H. Everett*).	Tweeddale Coll.
l', *m'*. ♂ ♀ ad. sk.	Baram, Sarawak, May, June.	C. Hose, Esq. [C.].
n'. ♂ imm. sk.	Suai River, Sarawak.	C. Hose, Esq. [P.].
o', *p'*. ♂ ♀ ad. sk.	Mt. Batu Sang, Sarawak, Jan.	C. Hose, Esq. [P.].

18. COTURNIX.

Type.

Coturnix, *Moehring, Av. Gen.* pp. 25, 54 (1752); *Bonn. Tabl. Encycl. Méth.* i. pp. lxxxvii, 216 (1791)..... C. coturnix.
Ortygion, *Keyserl. u. Blas. Wirbelth. Europa's*, pp. lxvi, 112, 202 (1840)..... C. coturnix.
Perdortyx, *Montess. Mém. Soc. Saône*, vi. p. 36 (1886). C. coturnix.

Tail of 10–12 feathers, short, soft, covered by the upper tail-coverts; less than half the length of the wing.

1st primary is slightly shorter than the 2nd and equal to the 4th, 2nd and 3rd slightly the longest.

Axillaries long and white.

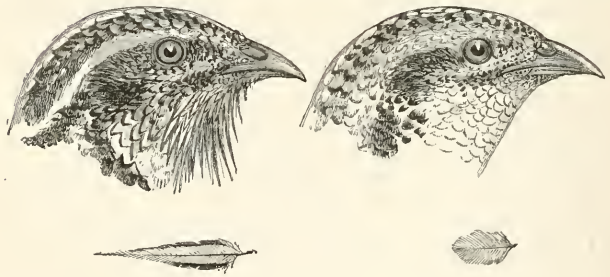
Tarsus without spurs.

Range. Eastern Hemisphere, and North America [*introduced*].

Key to the Species.

A. Outer web of the primaries with irregular bars and marks of buff.
  a. Chin and throat white, with a black band commencing on the chin and passing down the middle of the throat. *coturnix* ♂, p. 231.
  b. Chin and throat bright rufous chestnut, with a black band situated as above.. *capensis* ♂, p. 237.
  c. Chin and throat dull brick-red, without any black markings..... *japonica* ♂, p. 239.
  d. Feathers on the chin and sides of the throat white, short and rounded. No black band down the middle of the throat.
    a'. Size larger: wing ca. 4·2..... *coturnix* ♀, p. 231.
    b'. Size smaller: wing ca. 3·8 ..... *capensis* ♀, p. 237.
  e. Feathers on the chin and sides of the throat elongate and lanceolate, usually margined on one or both webs with rufous. No black band down the middle of the throat ..... *japonica* ♀, p. 239.
B. Outer web of the primaries uniform brown, not barred and marked with buff.
  f. Chin and throat white, with a very clearly defined black anchor-shaped mark (a large black patch on the middle of the chest and breast).
    c'. General colour of the underparts buff. *coromandelica* ♂, p. 241.
    d'. General colour of the underparts chestnut..... *delegorguei* ♂, p. 243.

g. Chin and throat brick-colour or chestnut.
e'. Throat dull brick-colour. Size smaller: wing ca. 4·1 ..... *pectoralis* ♂, p. 244.
f'. Throat bright brick-colour or chestnut. Size larger: wing ca. 4·6 .... *novæ-zealandiæ* ♂, p. 245.
h. Chin and throat white or buff, without a black band down the centre.
g'. Chest-feathers without a submarginal black band on either web.
a''. Ground-colour of the wing-coverts sandy buff; underparts pale buff. *coromandelica* ♀, p. 241.
b''. Ground-colour of the wing-coverts blackish grey; underparts rufous buff or dull chestnut ..... *delegorguei* ♀, p. 243.
h'. Chest-feathers with a submarginal black band on either web.
c''. Black bands on the feathers of the breast not confluent in the median line but separated by a buff isthmus. Size smaller: wing ca. 4·1 ..... *pectoralis* ♀, p. 244.
d''. The black bands on the feathers of the breast separated only by the pale shaft. Size larger: wing ca. 4·6 ..... *novæ-zealandiæ* ♀, p. 245.



II. I.

1. *Coturnix coturnix*, ♀ ad. II. *C. japonica*, ♀ ad.*

Perhaps no species of Game Birds have been more confused, and their changes of plumage less understood, than the Common Quail (*Coturnix coturnix*) and its near ally the Japanese Quail (*C. japonica*); and I am pleased to say that I have now at last discovered definite and well-marked characters by which both the males and females of these two species may be readily distinguished, while the intermediate forms are, as I shall presently show, undoubtedly the results of interbreeding.

Coturnix japonica is the resident bird found in Japan and China, and sometimes occurs in N.E. India and Burmah, as there are

* These woodcuts as well as the following remarks are reproduced from Ann. Mag. N. H. 1892, x. pp. 169–171.

specimens of this species in the British Museum obtained in Bootan and Karen-nee. The male is characterized by the uniform dull brick-red throat without any trace of a black band down the middle, and the female by having the feathers on the chin and sides of the throat elongate and lanceolate and of much the same structure as those found in *Perdix barbata*.

The typical form of *Coturnix coturnix*, commonly known as the migratory Quail of Europe, has the throat pure white, the male having a black anchor-shaped mark down the middle, while in the female the feathers on the sides of the throat are short and rounded, never elongate as in the female of *C. japonica*. This bird ranges over an enormous area, practically the whole of the Ethiopian and Palæarctic Regions, extending in the south to South Africa and in the east to China and Japan. In the islands surrounding the African coast, namely Mauritius, Madagascar, the Comoro Islands, the Cape-Verd Islands, the Canaries, Madeira, and the Azores, and also in the southern part of Africa south of about 15° S. lat., a resident subspecies of *C. coturnix*, known as *C. capensis*, is found, which is distinguished from the typical form by its somewhat smaller size and by having the throat of the male bright rufous-chestnut with a black anchor-shaped mark down the middle. In Japan and China the migratory Quail (*C. coturnix*), as already pointed out, inhabits the same tract of country during the breeding-season as *C. japonica*, and there cannot be the slightest doubt that the two species frequently interbreed, with the result that all sorts of intermediate hybrids are produced. These intermediate plumages are most noticeable among the male hybrids. For instance, some have the dull brick-red throat of *C. japonica* and the black anchor-shaped mark of *C. coturnix*, others have only the upper two-thirds of the throat dull red and the lower third white, while again a third lot have in addition a black band down the centre of the red part, and all kinds of intermediate stages between these three examples may be found. These hybrids are, so far as I know, generally only found in Mongolia, China, and Japan, though there is one specimen in the very large series of the British Museum said to have been obtained in Bootan. Equally also, though of secondary importance, *C. coturnix* interbreeds freely with the red-throated resident race (*C. capensis*) in South Africa and the islands surrounding the coast, and the results are seen in the many male birds from South Africa and Southern Europe &c. in which the white parts on the sides of the head and throat are more or less suffused with the bright rufous-chestnut of the resident bird.

The females of course are not to be distinguished. I may add that Indian examples of *C. coturnix* are, generally speaking, very pure bred and seldom show any trace of rufous on the sides of the head and throat.

1. Coturnix coturnix.

La Caille, *Briss. Orn.* i. p. 247 (1760); *Buff. Hist. Nat. Ois.* ii. p. 449, pl. xvi. (1771); *D'Aubent. Pl. Enl.* ii. pl. 49. no. 170.
Tetrao israelitarum, *Hasselq. Reise Palaest.* p. 331 (1762).

Tetrao coturnix, *Linn. S. N.* i. p. 278 (1766); *Gmel. S. N.* i. pt. ii. p. 765 (1788); *Pall. Zoogr. Rosso-As.* ii. p. 80 (1811).

La Caille blanche, *Buff. Hist. Nat. Ois.* ii. p. 476 (1771).

Common Quail, *Lath. Gen. Syn.* ii. pt. ii. p. 779 (1783), Suppl. ii. p. 280 (1802); *id. Gen. Hist.* viii. p. 312 (1823).

Perdix coturnix, *Lath. Ind. Orn.* ii. p. 651 (1790); *Meyer & Wolf, Tasch. Deuts.* i. p. 306 (1810); *Penn. Brit. Zool.* i. p. 366 (1812); *Temm. Man. d'Orn.* ii. p. 491 (1820); *Millet, F. Maine-et-Loire*, ii. p. 396 (1828); *Vieill. Faun. Franç.* p. 255, pl. iii. figs. 2 & 3 (1828); *Wern. Atl. Orn. d'Eur.* Ord. 10, pl. 20 (1828); *Roux, Orn. Prov.* ii. p. 43, pl. 261 (1830); *Ménétr. Cat. Rais.* p. 47 (1832); *St.-Hilaire, Exp. Morée*, iii. p. 53 (1833); *Selb. Ill. Brit. Orn.* i. p. 437, pl. lxii. (1833); *Naum. Nat. Vög. Deutschl.* vi. p. 575, pl. 166 (1833); *Schinz, Nat. Abbild. Vög.* p. 273 (1833); *Körner, Skand. Fogl.* p. 13, pl. 28. fig. 5 (1839–46); *Benoit, Orn. Sicil.* p. 120 (1840); *Schinz, Europ. Faun.* i. p. 290 (1840); *Cresnon, Orn. Gard*, p. 335 (1840); *Démid. Voy. Russ. Mérid.* iii. p. 221 (1840); *Yarrell, Hist. Brit. B.* ii. p. 355 (1843); *Malherbe, Faun. Orn. Sicil.* p. 155 (1843); *Degl. Orn. Europ.* ii. p. 63 (1849); *Kjærboll. Danm. Fugle*, p. 235 (1852); *Drouët, Faun. Açoréenne*, p. 124 (1861); *Companyo, Hist. Nat. Pyrén.* iii. p. 204 (1863); *Bert. Cat. An. l'Yonne*, p. 59 (1864); *Sperl. Ibis*, 1864, p. 285 [Malta]; *Wright, Ibis*, 1864, p. 139 [Malta. Gozo]; *Fallon, Ois. Belg.* p. 138 (1875); *Palmén, J. f. O.* 1876, p. 42 [Finland]; *Koenig, J. f. O.* 1886, pp. 516, 523 [Isl. of Capri].

Coturnix communis, *Bonn. Tabl. Encycl. Méth.* i. p. 217, pl. 96. fig. 2 (1791); *Gray, List of B.* pt. iii. *Gall.* p. 38 (1844); *id. Cat. Hodgs.* ed. i. p. 128 (1846); *id. Gen. B.* iii. p. 507 (1846); *Hartl. Syst. Orn. W.-Afr.* p. 203 (1857); *Adams, P. Z. S.* 1858, p. 504 [India]; *Jaubert et Lapomm. Rich. Orn.* p. 423 (1859); *Tristr. Ibis*, 1860, p. 72 [N. Africa]; *Jerd. B. Ind.* iii. p. 586 (1863); *Swinh. Ibis*, 1863, p. 398; *id. P. Z. S.* 1863, p. 308 [China, Japan, Formosa]; *Fitzinger, Atl. Nat. Vög.* fig. 238 (1864); *More, Ibis*, 1865, p. 429 [Great Britain]; *Degl. & Gerbe, Orn. Europ.* ii. p. 80 (1867); *Gray, List Gallinæ Brit. Mus.* p. 59 (1867); *Drake, Ibis*, 1867, p. 428 [Tangier? & E. Morocco]; *Tristr. Ibis*, 1868, p. 215 [Palestine]; *v. Pelz. Ibis*, 1868, p. 321 [Koteghur]; *Beavan, Ibis*, 1868, p. 386 [India]; *Smith, Ibis*, 1868, p. 450 [Portugal]; *Wyatt, Ibis*, 1870, p. 17 [Sinai]; *Elwes & Buckley, Ibis*, 1870, p. 328 [Turkey]; *Blanf. Ibis*, 1870, p. 470 [Pegu]; *Gray, Hand-l. B.* ii. p. 268 (1870); *Fritsch, Nat. Vög. Europa*, p. 294 (1870), pl. xxx. figs. 7 & 8 (1871); *Shelley, Ibis*, 1871, p. 143 [Egypt]; *Saunders, Ibis*, 1871, p. 224 [S. Spain]; *Gurney, Ibis*, 1871, p. 296 [Algeria]; *Fritsch, J. f. O.* 1871, p. 380 [Bohemia]; *Shelley, B. Egypt*, p. 223 (1872); *Rey, J. f. O.* 1872, p. 154 [Portugal]; *Shelley & Buckley, Ibis*, 1872, p. 292 [Accra]; *Hume, Str. F.* i. p. 227 (1873) [Sindh]; *Hend. & Hume, Lahore to Yark.* p. 284 (1873); *Hume, Nests & E. Ind. B.* p. 549 (1873); *Heugl. N.O.-Afr.* iii. p. 904 (1873); *Brooke, Ibis*, 1873, p. 336 [Sardinia]; *Adam, Str. F.* i. p. 393 (1873) [Sambhur]; *Ball, Str. F.* ii. p. 428 (1874) [Chota Nagpur]; *Stoliczk. Str. F.* iii. p. 218 (1875) [Kashgar]; *Le Mess. Str. F.* iii. p. 379 (1875) [Sindh]; *Blyth & Walden, Cat. Mamm. & B. Burma*, p. 151 (1875) [Arrakan, Karen-nee, Martaban]; *Wharton, Ibis*, 1876, p. 26 [Corsica]; *Dresser, Ibis*, 1876, p. 323 [Turkestan]; *But'er, Str. F.* iv. pp. 7, 35 (1876) [Guzerat]; *Scully, Str. F.* iv. p. 184 (1876) [E. Turkestan]; *Fairb. Str. F.* iv. p. 262 (1876) [Deccan]; *Prjev. Mongolia*, ii. p. 125 (1876); *David & Oustal. Ois. Chine*, p. 396 (1877) [part]; *Bau, &c. J. f. O.* 1877, p. 325 [Germany];

Hume & Davison, Str. F. vi. p. 447 (1878) [not found in Tenasserim]; *Davidson & Wenden, Str. F.* vii. p. 87 (1878) [Deccan]; *Ball, Str. F.* vii. p. 226 (1878) [Ganges to Godaveri]; *Cripps, Str. F.* vii. p. 298 (1878) [Faridpur]; *Dress. B. Europe,* vii. p. 143, pl. 476 (1878); *Liebe, J. f. O.* 1878, p. 77 [E. Hungary]; *Cab. J. f. O.* 1878, p. 416 [Germany]; *Butl. Cat. B. Sind, &c.* p. 55 (1879); *Hume & Marsh. Game B. Ind.* ii. p. 134, pl. (1879); *Bogd. B. Caucas.* p. 143 (1879); *Rudolf, J. f. O.* 1879, p. 72 [Danube]; *Garrod, P. Z. S.* 1879, p. 362, figs. 9, 10; *Scully, Str. F.* viii. pp. 350, 367 (1879) [Nepal]; *Doig, Str. F.* viii. p. 371 (1879) [E. Narra]; *Finsch, Verh. Ges. Wien,* xxix. p. 241 (1880) [Surgut, Narym]; *Butl. Cat. B. S. Bombay,* p. 69 (1880); *Seebohm, Ibis,* 1880, p. 193 [Krasnoyarsk]; *Legge, B. Ceylon,* iii. p. 756 (1880); *Vidal, Str. F.* ix. p. 76 (1880) [S. Konkan]; *Hume & Inglis, Str. F.* ix. p. 258 (1880) [N.E. Cachar]; *Biddulph, Str. F.* ix. p. 359 (1880); *Butler, Str. F.* ix. p. 423 (1880); *Barnes, Str. F.* ix. p. 458 (1880); *Cab. J. f. O.* 1880, pp. 69, 392, 1882, p. 88, 1883, p. 60 [Germany]; *Reid, Str. F.* x. p. 63 (1881) [Lucknow]; *Scully, Str. F.* x. p. 139 (1881); *id. Ibis,* 1881, p. 586 [Gilgit]; *Biddulph, Ibis,* 1881, p. 94 [Gilgit]; *Sclat. & Hartl. P. Z. S.* 1881, p. 173 [Socotra]; *Saund. ed. Yarrell Brit. B.* iii. p. 123 (1882); *Swinhoe, Ibis,* 1882, p. 119 [S. Afghanistan]; *Seebohm, Ibis,* 1882, p. 220 [Astrachan]; *Dixon, Ibis,* 1882, p. 577 [Prov. of Constantine]; *Oates, Str. F.* x. p. 236 (1882) [Pegu, Bassein]; *Davidson, Str. F.* x. p. 317 (1882) [W. Khandeish]; *Oates, B. Burmah,* ii. p. 331 (1883); *Davison, Str. F.* x. p. 411 (1883) [Ootacamund, Nilghiris]; *Meyer, J. f. O.* 1883, p. 394 [Hanover]; *Seebohm, Ibis,* 1883, p. 27 [Caucasus]; *Severtz. Ibis,* 1883, p. 72 [Pamir]; *Irby, Ibis,* 1883, p. 185 [Santander]; *Clarke, Ibis,* 1884, p. 147 [Slavonia, Hungary]; *Tristr. Palest.* p. 124 (1884); *Cab. J. f. O.* 1884, p. 37 [Germany]; *Seebohm, Hist. Brit. B.* ii. p. 462 (1884); *Bogd. Consp. Av. Imp. Ross.* fasc. i. p. 43 (1884); *Whitehead, Ibis,* 1885, p. 41 [Corsica]; *Swinh. & Barn. Ibis,* 1885, p. 131 [Central India]; *Meves & Homeyer, Ornis,* 1886, p. 247 [N.W. Russia]; *Pleske, Uebers. Vög. Kola-Halbinsel,* p. 298 (1886); *Gigl. Avif. Ital.* p. 341 (1886); *Lorenz, Beitr. Orn. Kaukas.* p. 56 (1887); *Hartert, J. f. O.* 1887, p. 263 [Wesel & Lower Rhine]; *Symonds, Ibis,* 1887, p. 333 [Orange Free State]; *Tait, Ibis,* 1887, p. 380 [Portugal]; *Taylor, Str. F.* x. p. 465 (1887) [Manzeerabad, Mysore]; *Salvad. El. Ucc. Ital.* p. 201 (1887), p. 540 (1888); *Giglioli, Ann. Mus. Civ. Genov.* xxvi. p. 61 (1888) [Shoa]; *Pleske, Mém. Ac. St.-Pétersb.* (7) xxxvi. no. 3, p. 47 (1888); *Hume, Str. F.* xi. p. 309 (1888) [Manipur]; *Saund. Ill. Man. Brit. B.* p. 491 (1889); *St. John, Ibis,* 1889, p. 175 [Kandahar]; *Gigl. Avif. Ital.* i. p. 527 (1889), ii. p. 649 (1890), iii. p. 510 (1891); *Oates, ed. Hume's Nests & E. Ind. B.* iii. p. 443 (1890); *Dubois, Ornis,* 1890, p. 327 [Belgium]; *Kaiser, Ornis,* 1890, p. 523 [Egypt]; *Evans, Ibis,* 1891, p. 75; *Hart, Faun. Flor. Sinai,* p. 225 (1891); *Styan, Ibis,* 1891, pp. 329, 500 [Lower Yangtze Basin]; *Barnes, Ibis,* 1893, p. 167 [Aden].

Coturnix alba, *Bechst. Nat. Deutschl.* iii. p. 581 (1793).

Coturnix nigra, *Bechst. Nat. Deutschl.* iii. p. 582 (1793).

Coturnix varia, *Bechst. Nat. Deutschl.* iii. p. 581 (1793).

Coturnix major, *Bechst. Nat. Deutschl.* iii. p. 581 (1793); *id. Handb. Vög. Deutschl.* p. 527 (1831); *Montagu, Orn. Dict.* ed. 2, p. 394, woodcut (1831); *Fontaine, Faune Luxemb., Ois.* p. 178 (1865); *Olphe-Galliard, Faun. Orn. Europe Occ.* fasc. xxxix. p. 39 (1886).

Coturnix dactyliscnans, *Temm. Pig. et Gall.* iii. pp. 478, 740 (1815); *Meyer, Vög. Liv- u. Esthl.* p. 167 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 361, pl. 24 (1819); *Sykes, P. Z. S.* 1832, p. 152 [Deccan]; *Gould, B. Europe*, iv. pl. 263 [text] (1837); *Macgill. Brit. B.* i. p. 233 (1837); *Strickl. P. Z. S.* 1850, p. 220; *Tristr. Ibis*, 1859, p. 36 [S. Palestine]; *Swinh. Ibis*, 1861, pp. 50, 260, 341 [China]; *Adams, Ibis*, 1864, p. 28 [Egypt & Nubia]; *Filippi, Viag. Pers.* i. p. 351 (1865); *Swinh. P. Z. S.* 1870, p. 602 [N. lat. 33°, E. long. 127° 30']; *Tacz. J. f. O.* 1870, p. 511 [Constantine, Algeria], 1873, p. 99; *Rowley, Orn. Misc.* i. pl. xii. figs. 3 & 4 (1875), ii. p. 91 (1877); *Tacz. Bull. Soc. Zool. Fr.* ii. p. 154 (1877) [Poland]; *Barratt, Ibis*, 1876, p. 208 [British Kaffraria & Transvaal]; *Brandt, J. f. O.* 1880, p. 241 [St. Petersburg]; *Homeyer, Zeit. ges. Orn.* i. p. 261 (1884); *Dedit. J. f. O.* 1885, p. 207 [St. Petersburg]; *Cab. J. f. O.* 1885, p. 316, 1886, p. 350, 1887, p. 511, 1888, p. 530 [Germany]; *Yerbury, Ibis*, 1886, p. 20 [Aden]; *Koenig, J. f. O.* 1888, p. 257 [Tunis]; *Meyer & Helm, Zeit. ges. Orn.* iv. p. 373 (1888); *Tacz. Ornis*, 1888, p. 487; *Sharpe, Tr. Linn. Soc.* (2) *Zool.* v. p. 87 (1889); *De la Torre u. Tschusi, Ornis*, 1885, p. 496, 1887, p. 283, 1888, p. 252, 1888, Suppl. p. 263, 1890, p. 140 [Austria, Hungary]; *Steen, Vög. Schlesw.-Holst.* p. 82 (1891).

Perdix cothurnix, *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 248 (1817).

Coturnix media, *Brehm, Handb. Vög. Deutschl.* p. 528 (1831).

Coturnix minor, *Brehm, Handb. Vög. Deutschl.* p. 529 (1831).

Coturnix europæus, *Swains. Class. B.* ii. p. 344 (1837).

Ortygion coturnix, *Keyserl. u. Blas. Wirbelth. Europa's*, p. 202 (1840); *Linderm. Vög. Griechenl.* p. 125 (1860); *Collett, Vid. Selsk. Forh. Christ.* 1868, p. 160; *Alston & Brown, Ibis*, 1873, p. 66 [Sumja]; *Danf. & Brown, Ibis*, 1875, p. 418 [Transylvania]; *Severtz. J. f. O.* 1875, p. 181 [Turkestan]; *Radde, Orn. Caucas.* p. 354 (1884); *Radde & Walt. Ornis*, 1889, p. 87 [Transcaspia].

Coturnix vulgaris, *Bout. Orn. Dauphiné*, p. 72, pl. 43. fig. 1 (1843); *Thomps. Nat. Hist. Irel.* ii. p. 66 (1850); *Walters, N. Hist. B. Irel.* p. 129 (1853); *Taylor, Ibis*, 1859, p. 50 [Egypt]; *Powys, Ibis*, 1860, p. 238 [Ionian Is.]; *Irby, Ibis*, 1861, p. 236 [Oudh, Kumaon]; *Tristr. P. Z. S.* 1864, p. 449; *Tschusi, J. f. O.* 1870, p. 272 [Galicia, Poland]; *Gray, B. West Scot.* p. 245 (1871); *Severtz. Turkest. Jevotnie*, p. 68 (1873); *Irby, Orn. Gibraltar*, p. 138 (1875); *Booth, Rough Notes*, ii. pp. 1, 2 (1881–7); *Lilford, Ibis*, 1889, p. 335 [Cyprus].

Coturnix dactylisonans? v. indicus, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844); *id. Icon. ined. in Brit. Mus.* nos. 130, 131.

Ortyx coturnix, *Chenu et Desm. Encycl. Ois.* vi. p. 154 (1854).

Coturnix coturnix, *Licht. Nomencl. Av.* p. 84 (1854); *Sharpe, ed. Layard's B. S. Afr.* p. 603 (1884) [part.]; *id. Ibis*, 1886, p. 489, 1891, p. 111 [Fao]; *id. Second Yark. Miss.* p. 122 (1891); *Grant, Ann. Mag. N. H.* (6) x. pp. 167, 168, 169 (1892).

Coturnix baldami, *Naum. fide Brehm, Vogelfang*, p. 274 (1855).

Coturnix leucogenys, *Brehm, Naumann.* p. 288 (1855).

Turnix coturnix, *Salvin, Ibis*, 1859, p. 353 [Tunis].

Coturnix chinensis, *Swinhoe, Ibis*, 1860, pp. 63, 358 [Amoy].

Synoicus lodoisiæ *, *Verreaux & Des Murs, Rev. et Mag. Zool.* 1862,

* Through the kindness of Dr. G. Martorelli, I have been enabled to examine the type of this supposed species, which is unquestionably merely a dark form of the Common Quail, and is to *C. coturnix* what the so-called Sabine's Snipe is to *Gallinago cœlestis*—a semi-melanistic variety.

p. 225, pl. xi. [Lombardy]; *Sclater*, *Ibis*, 1862, p. 380: *Saunders*, *Ibis*, 1869, p. 393; *Salvin & Sclat. Ibis*, 1877, p. 129; *Giglioli*, *Ibis*, 1881, p. 186.

Coturnix ypsilophorus, *Bosc* ?, *fide Gray*, *Hand-l. B.* ii. p. 268 (1870).

Coturnix vulgaris β. baldami, *Severtz. Turkest. Jevotnie*, p. 68 (1873) [Turkestan].

Ortygion coturnix β. baldami, *Severtz. J. f. O.* 1875, p. 181.

Ortyx communis, *Lemett*, *Cat. Ois. Seine Inf.* p. 129 (1879).

Coturnix communis orientalis, *Bogdanow*, *Consp. Av. Imp. Ross.* fasc. i. p. 44 (1884); *Zaroudn. Bull. Mose.* lxi. p. 323 (1885) [Transcaspia]; *id. l. c.* p. 108 (1890) [Transcaspia].

Perdortyx lodoisiæ, *Montess. Mém. Soc. Saône*, vi. p. 36 (1886).

Adult male. Top of the head black, all the feathers tipped with brown or reddish brown, a white or pale buff stripe down the middle of the head; feathers of the mantle sandy or reddish brown, each with a wide buff black-edged shaft-stripe tapering to a point, and with a wide black bar or blotch on one or both webs. The scapulars and feathers of the back, rump, and upper tail-coverts are very similar to the mantle, but the ground-colour is generally black with narrow ⩛-shaped transverse bars of dirty or reddish white, and the shaft-stripes are wider and confined to a line of feathers down each side of the spine, forming a regular pattern. The lesser, median, and secondary coverts are sandy brown, with very narrow shaft-stripes and transverse bars of buff edged with black. Primaries, primary-coverts, and secondaries blackish brown, the former barred and mottled on the outer web, the latter on both, with buff. Lores and superciliary stripe white, a reddish or blackish-brown band commences behind the upper angle of the nostril and passes through the eye over the ear-coverts; a black or sometimes reddish-black band extends backwards to behind the eye from the angle of the gape; a black angle-shaped mark * commences on the chin and passes down the middle of the throat, the arms curving upwards to the ear-coverts. The remaining portions of the sides of the head, chin, and throat are white, and usually separated from the chest by an ill-defined band of black and rust-coloured spots. Chest rufous buff, with white shafts, shading into whitish buff on the rest of the underparts; sides and flanks reddish buff, spotted with black, and with wide white black-edged shaft-stripes. Tail-feathers black, tipped with whitish and barred with buff. Total length 6·7 inches, wing 4·2, tail 1·5, tarsus 1.

Young males resemble the adult female, but the chest has only a few black spots.

Adult female. Differs from the adult male in having no black band down the middle of the throat, only the arms of the anchor-shaped mark being somewhat imperfectly represented, and the chest is more or less thickly spotted with black.

Hab. Europe, Asia (except the south-west corner, Siam, &c.), Africa.

* In some specimens the middle black band is very much wider than in others, and covers a large part of the throat. These are apparently very old specimens.

a–*c*. ♂ ad. et pull. sk.	Cambridgeshire.	Purchased.
d. ♀ ad. sk.	Cambridgeshire, March (*P. Godman*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Croydon, May (*Davey*).	Tweeddale Coll.
f. Pull. sk.	Bourne, Aug. (*Evans*).	J. H. Gurney, Jr., Esq. [P.].
g. ♂ ad. sk.	Somersetshire.	Montague Coll.
h. ♂ ad. sk.	Heligoland, May (*Gätke*).	Seebohm Coll.
i, *k*. ♂ ♀ ad. sk.	Spain.	Seebohm Coll.
l. ♂ ad. sk.	Rome, Jan. (*P. L. Sclater*).	Gould Coll.
m. ♂ nr. ad. sk.	Vienna.	Dr. R. B. Sharpe [P.].
n. ♂ imm. sk.	Has-keui, April.	Dr. R. B. Sharpe [P.].
o, *p*. ♂ ♀ ad. sk.	Cyprus, May (*H. Guillemard*).	Lord Lilford [P.].
q, *r*. ♂ ♀ ad. sk.	Egypt, Feb., April (*G. E. S.*).	Shelley Coll.
s. ♂ nr. ad. sk.	Kisgath, Palestine.	Canon Tristram [P.].
t. ♂ ad. sk.	Socotra, March.	Prof. Balfour [C.].
u, *v*. ♀ ad. sk.	Fao, Persian Gulf, Sept.	W. D. Cumming, Esq. [P.].
w. ♀ ad. sk.	Mekran Coast (*E. A. Butler*).	Hume Coll.
x. ♂ ad. sk.	Toman-agha, Afghanistan, April (*J. Aitchison*).	Afghan. Delim. Comm. [P.].
y. ♀ ad. sk.	Sang-hadji, Afghanistan, May (*J. Aitchison*).	Afghan. Delim. Comm. [P.].
z. ♂ nr. ad. sk.	Sindh.	Hume Coll.
a'. ♂ ad. sk.	Roree, Nov.	Hume Coll.
b'. ♂ ad. sk.	Deesa, Feb. (*E. A. Butler*).	Hume Coll.
c'–*e'*. ♂ ♀ ad. sk.	Sambhur, April & Nov. (*R. M. Adam*).	Hume Coll.
f', *g'*. ♂ ♀ ad. sk.	Sirza Dist., Punjab, Dec. (*A. O. H.*).	Hume Coll.
h', *i'*. ♀ ad. et imm. sk.	Punjab, Jan., Dec.	Hume Coll.
k'. ♀ ad. sk.	Yupchan, Cashmere, Dec. (*J. Biddulph*).	Hume Coll.
l', *m'*. ♂ ♀ ad. sk.	N.W. India.	Capt. Stackhouse Pinwill [P.].
n'. ♂ nr. ad. sk.	Himalaya Mts.	
o'. ♂ ad. sk.	Dhurmsala, May.	Hume Coll.
p'. ♀ ad. sk.	Umballah, Nov. (*R. C. Beavan*).	Tweeddale Coll.
q'–*w'*. ♂ ♀ ad. et imm. sk.	Etawah, March, April, Oct., Nov. (*W. E. Brooks*).	Hume Coll.
x'. ♀ ad. sk.	Cawnpur, May (*W. E. B.*).	Hume Coll.
y'. ♂ ad. sk.	Sultanpur, Oudh.	Hume Coll.
z'–*b''*. ♂ ♀ ad. sk.	Nepal Valley, Nov. & Dec. (*J. Scully*).	Hume Coll.
c''–*l''*. ♂ ♀ ad. et imm.	Nepal.	B. H. Hodgson, Esq. [P.].
m''. ♂ nr. ad.	Darjeeling.	Tweeddale Coll.
n''. ♀ ad. sk.	Buxa Doars, Feb. (*L. Mandelli*).	Hume Coll.
o''. ♂ ad. sk.	Bengal, Sept. (*Blyth*).	India Museum [P.].
p''. ♂ ad. sk.	Behar.	B. H. Hodgson, Esq. [P.].

q'', *r''*. ♂ nr. ad. et ♀ imm.	Faridpur, Feb. & March (*J. R. Cripps*).	Hume Coll.
s''–*u''*. ♂ ♀ ad. et imm. sk.	N.E. India.	Tweeddale Coll.
v'',*w''*. ♂ ♀ ad.sk.	Raipur.	Hume Coll.
x''. ♀ ad. sk.	Saugor (*W. T. Hooper*).	India Museum.
y'', *z''*. ♂ ♀ ad.sk.	Deccan (*Sykes*).	India Museum.
a^3–c^3. ♂ ad. sk.	Khandeish.	Tweeddale Coll.
d^3. ♀ ad. sk.	Bassein, N. Konkan (*Capt. James*).	Hume Coll.
e^3. ♀ ad. sk.	S. Konkan, Dec. (*G. Vidal*).	Hume Coll.
f^3. ♀ ad. sk.	Ootacamund, May (*W. Davison*).	Hume Coll.
g^3–i^3. ♂ ♀ ad. sk.	Lawrencepur, March (*R. G. W. R.*).	Tweeddale Coll.
k^3, l^3. ♂ ♀ ad. sk.	Madras.	Gould Coll.
m^3. ♀ ad. sk.	Dilkooshah, Cachar, Sept. (*J. Inglis*).	Hume Coll.
n^3. ♂ nr. ad. sk.	Krasnojarsk, Nov.	Seebohm Coll.
o^3. ♀ ad. sk.	China (*Tuckett*).	Tweeddale Coll.
p^3–u^3. ♂ ♀ ad. sk.	Chefoo, May, June, Oct. (*R. Swinhoe*).	Tweeddale and Seebohm Colls.
v^3. ♀ ad. sk.	Fokien, Sept. (*R. Swinhoe*).	Tweeddale Coll.
w^3, x^3. ♂ ♀ ad. sk.	Amoy, Jan. & Nov. (*R. Swinhoe*).	Seebohm Coll.
y^3–a^4. ♀ ad. sk.	Hakodadi, Japan, Aug.	Seebohm Coll.
b^4. ♀ ad. sk.	Nagasaki, Nov.	F. Ringer, Esq. [P.].
c^4–g^4. Ad. skeleton, skulls & sternum.	Würtemburg.	Dr. A. Günther [P.].

A curious variety or semi-melanistic form of *C. coturnix* occurs in Spain in the marshy neighbourhood of Valencia. In the *male* the general colour of the upper parts is black, with narrow buff or rufous cross-bars; the pattern formed by the wide golden-buff shaft-streaks on the feathers of the mantle and on either side of the body is normal; the greater part of the sides of the head, chin, and throat are black, interspersed here and there with a white feather; the chest-feathers are mottled with black, and the feathers of the sides and flanks are black, dotted with rufous, and with a wide white shaft-stripe down the middle of each. In the *female* all the underparts are suffused with dirty brown.

a, *b*. ♂ ♀ ad. sk.	Valencia, Oct. (*H. Saunders*).	Tweeddale Coll.

Subsp. *a*. Coturnix capensis.

Perdix coturnix, *Webb & Berth. Orn. Can.* p. 29 (1836–44); *Harc. Ann. Mag. N. H.* (2) xv. p. 437 (1855) [Madeira]; *Bolle, J. f. O.* 1855, p. 173, 1857, p. 334 [Canaries].

Coturnix dactylisonans, *Strickl. & Sclat. (nec Temm.) in Jard. Contr. Orn.* 1852, p. 157 [Damaraland]; *Newton, Ibis*, 1863, p. 192 [Madeira]; *Layard, B. S. Afr.* p. 274 (1867); *Ayres, Ibis*, 1874, p. 103, 1878, p. 410 [Transvaal]; *Sharpe in Oates' Matabele L.* p. 324 ( ) [Transvaal]; *Koenig, J. f. O.* 1890, p. 449 [Madeira, Canaries].

Coturnix communis, *Cass.* (*nec Bonn.*) *U.S. Expl. Exped.* p. 288 (1858) [Cape de Verde Is.]; *Newton, Ibis*, 1863, p. 454 [Madagascar]; *Godman, Ibis*, 1866, pp. 99, 107 [Azores]; *Schl. in Poll. & Van Dam, Rech. Madagasc.* pt. ii. p. 120 (1868); *Gurney, Ibis*, 1868, p. 467 [Potchefstroom]; *Godman, Azores*, p. 32 (1870); *Dohrn, J. f. O.* 1871, p. 8 [Cape Verde Is.]; *Gurney, ed. Anderss. B. Damaral.* p. 248 (1872); *Newton, P. Z. S.* 1877, pp. 301, 302 [Comoro Is.]; *Ayres, Ibis*, 1878, p. 298 [Potchefstroom]; *Hartwig, J. f. O.* 1886, p. 484 [Madeira]; *Sibree, Ibis*, 1891, p. 565 [Madagascar]; *Waldo, Ibis*, 1893, p. 201 [Canary Is.].

Coturnix capensis, *Licht. fide Gray, Hand-l. B.* ii. p. 268 (1870); *Grant, Ann. Mag. N. H.* (6) ix. pp. 167, 169, 170 (1892).

Ortygion coturnix, *Godman, Ibis*, 1872, p. 219 [Canaries, Madeira, Azores].

Cothurnix dactylisonans, *Holub & Pelz. Beitr. Orn. S.-Afr.* p. 188 (1882).

Coturnix coturnix, *Sharpe's ed. Layard's B. S. Afr.* p. 603 (1884) [part.]; *Clifton, Ornis*, 1888, p. 153 [King William's Town].

Adult male. Differs from the adult male of *C. coturnix* in having the lores, sides of the head, chin, and throat bright rufous chestnut, the chest washed with the same. Total length 6·3 inches, wing 3·9–4, tail 1·4, tarsus 1·1.

Adult female. The plumage does not differ from that of *C. coturnix*.

Younger males resemble the adult, but the black band down the middle of the throat is indistinctly represented or absent.

Hab. South Africa, south of about 15° S. lat., Mauritius, Madagascar, Comoro Islands, Cape Verd Islands, Canaries, Madeira, and Azores.

a. ♂ ad. sk.	Mauritius.	
b. ♂ ad. sk.	Madagascar, Feb. (*W. Deans Cowan*).	Tweeddale Coll.
c, d. ♂ ♀ ad. sk.	S. Africa.	Gould Coll.
e, f. ♂ ad. et ♂ imm. sk.	S. Africa.	J. Rocke, Esq. [P.].
g. ♀ ad. sk.	Cape.	Earl of Derby [P.].
h. ♂ ad. sk.	King William's Town.	Lieut. Anstey [P.].
i. ♂ ad. sk.	Durban, Natal (*Gordge*).	Shelley Coll.
k. ♂ nr. ad. sk.	Kroonstad, Orange Free State, April.	J. H. Gurney, Jr., Esq. [P.].
l. ♀ ad. sk.	Marico, Transvaal.	F. A. Barratt, Esq. [P.].
m. ♂ ad. sk.	Potchefstroom, March (*Ayres*).	J. H. Gurney, Jr., Esq. [P.].
n. ♀ ad. sk.	R. Gambia.	Tweeddale Coll.
o, p. ♂ ad. et ♂ nr. ad. sk.	Orotava, Teneriffe, April (*F. D. G.*).	Salvin-Godman Coll.
q, r. ♂ ♀ ad. sk.	Cape Verde Is.	M. A. Bouvier [P.].
s–y. ♂ ♀ ad. sk.	St. Michael, Azores, March (*F. D. G.*).	Salvin-Godman Coll.
z. ♂ nr. ad. sk.	Flores, Azores, May (*F. D. G.*).	Salvin-Godman Coll.

Intermediate forms between *Coturnix coturnix* and *C. capensis*.

a. ♂ ad. sk.	Cape Colony.	F. Thackeray, Esq. [P.].

b, c. ♂ ad. st. et sk.	Natal.	Purchased.
d. ♂ ad. sk.	Madeira.	C. J. Cossart, Esq. [P.].
e. ♂ ad. sk.	Croydon, May (*Dary*).	Tweeddale Coll.
f. ♂ ad. sk.	Cambridgeshire, Nov.	J. H. Gurney, Jr. Esq. [P.].
g. ♂ ad. sk.	Gibraltar.	Col. L. H. Irby [P.].
h. ♂ ad. sk.	Ursern, Switzerland.	Tweeddale Coll.
i. ♂ ad. sk.	Austria (*A. R. Wallace*).	Seebohm Coll.
k–n. ♂ ♀ ad. sk.	Hungary, April, May, Aug.	Hungarian National Mus. [E.].
o. ♂ ad. sk.	Off Cerigotto, S. of Greece (*Lord J. Browne*).	Gould Coll.
p. ♂ ad. sk.	India (*R. C. Beavan*).	Seebohm Coll.
q. ♂ ad. sk.	Kumaon (*Strachey*).	India Museum.
r. ♂ ad. sk.	E. Burdwan, Feb. (*R. C. Beavan*).	Tweeddale Coll.
s. ♂ imm. sk.	Shillong, Assam, Oct. (*J. Cockburn*).	Hume Coll.
t. ♂ ad. sk.	N.E. India.	Tweeddale Coll.

2. Coturnix japonica.

Coturnix vulgaris japonica, *Temm. & Schl. Faun. Jap.* p. 103, pl. 61 (1842); *Tacz. P. Z. S.* 1888, p. 467 [Corea].

Coturnix japonica, *Cass. in Perry's Exp. Jap.* ii. p. 227 (1856) [Hakodadi]; *Blakist. Ibis*, 1862, p. 329 [Hakodadi]; *Whitely, Ibis*, 1867, p. 204 [Hakodadi]; *Gray, Hand-l. B.* ii. p. 268 (1870); *Swinh. P. Z. S.* 1870, p. 602; *id. Ibis*, 1875, pp. 126, 452 [Chefoo]; *Tacz. Bull. Soc. Zool. Fr.* i. p. 224 (1876) [Dauria]; *Prjevalsky, Rowley's Orn. Misc.* ii. p. 424 (1877) [S.E. Mongolia, Ordos, Kansu, Koko-nor]; *Blakiston & Pryer, Ibis*, 1878, p. 226 [Japan]; *Seebohm, Ibis*, 1879, p. 28; *Grant, Ann. Mag. N. H.* (6) x. pp. 167, 170, 171 (1892) (with woodcut of head).

Ortygion coturnix, *Radde, Reise Ost-Sib.* ii. p. 306 (1863).

Coturnix muta, *Dybowski, J. f. O.* 1868, p. 337 (descr. nulla); *Przewal. J. f. O.* 1872, p. 138; *Tacz. J. f. O.* 1873, p. 99 [Daouria].

Coturnix communis, *Swinh.* (*nec Bonn.*) *P. Z. S.* 1871, p. 401 [N. China]; *David & Oustal. Ois. Chine*, p. 396 (1877) [part.]; *Prjevalsky, Rowley's Orn. Misc.* ii. p. 424 (1877) [S.E. Mongolia]; *Tacz. P. Z. S.* 1887, p. 610 [Corea]; *Seebohm, B. Jap.* p. 373 [part.] (1890).

Coturnix ussuriensis, *Bogd. Consp. Av. Imp. Ross.* fasc. i. p. 45 (1884) [Amoor & Lake Baikal].

Adult male. Differs from the male of *C. coturnix* chiefly in having the lores, sides of the head, chin, and throat *uniform* dull brick-red, without a trace of the black anchor-shaped mark; the margins of the flank-feathers mostly rufous and much less spotted with black. Total length 5·7 inches, wing 3·9, tail 1·2, tarsus 1·05.

Adult female. Differs from the female of *C. coturnix* in having the feathers of the chin and throat elongate and lanceolate, especially those on the sides of the latter, which are usually margined on the outer web with rufous; the margins of the chest, flank- and side-feathers mostly rufous, much less spotted with black.

Young males have the elongate throat-feathers like those of the

adult female, and the middle of the throat is suffused with dull brick-red; as the short rounded feathers of the adult are moulted the elongate feathers disappear; otherwise the plumage resembles that of the adult male.

Hab. Japan, Manchuria, S.E. Mongolia, and China, as far south as Cantou. Specimens have also been obtained in Bhootan and Karen-nee.

a. ♂ ad. sk.	Japan.	Tweeddale Coll.
b. ♀ ad. sk.	Japan.	C. Maries, Esq. [C.].
c–e. ♂ ad. et imm. sk.	Japan.	Exchanged.
f. ♀ ad. sk.	Yezo, Dec. (*McVean*).	Tweeddale Coll.
g, h. ♂ ad. sk.	S. Yezo, June, August.	Tweeddale & Seebohm Colls.
i–m. ♂ ♀ ad. sk.	Hakodadi, May, Aug., Oct.	Seebohm & Gould Colls.
n. ♂ ad. sk.	Fujiyama, Hondo.	Seebohm Coll.
o–t. ♂ ♀ ad. et imm. sk.	Nagasaki, Kiu-siu, Jan., Nov., Dec.	F. Ringer, Esq. [P.].
u. ♀ ad. sk.	Nagasaki.	Admiral St.John[P.].
v. ♀ ad. sk.	China.	Seebohm Coll.
w, x. ♂ ad. sk.	Kalgan, 2000 feet.	Gould Coll.
y, z. ♂ imm. sk.	Pekin, Nov. (*R. Swinhoe*).	Seebohm Coll.
a′–c′. ♂ ad. sk.	Chefoo, May (*R. Swinhoe*).	Seebohm & Tweeddale Colls.
d′. ♂ ad. sk.	Shanghai, Oct. (*R. S.*).	R. Swinhoe, Esq.[P.].
e′–h′. ♂ ♀ ad. sk.	Shanghai, Jan., Feb., Oct.	F. W. Styan, Esq.
i′. ♂ ad. sk.	Feng-wan-shan, April.	Tweeddale Coll.
k′–o′. ♂ ♀ ad. et ♂ imm. sk.	Amoy, Jan., Feb., April, Aug. (*R. Swinhoe*).	Seebohm Coll.
p′, q′. ♂ imm.; ♀ ad. sk.	Canton (*Tuckett*).	Tweeddale & Seebohm Colls.
r′. ♀ ad. sk.	Hong-kong.	'Challenger' Exped.
s′. ♀ ad. sk.	Bhootan (*Pemberton*).	India Museum [P.].
t′. ♀ ad. sk.	Karen-nee, March (*R.G.W.R.*).	Tweeddale Coll.

Intermediate specimens between *Coturnix coturnix* and *C. japonica.*

a. ♂ ad. sk.	Tschikai R., Trans-Baikal, July.	Purchased.
b. ♂ ad. sk.	Kalgan (2000 feet).	Gould Coll.
c, d. ♂ ad. et imm. sk.	Pekin, Nov. (*R. Swinhoe*).	Tweeddale & Seebohm Colls.
e, f. ♂ ♀ ad. sk.	Chefoo, May (*R. Swinhoe*).	Tweeddale & Seebohm Colls.
g. ♂ imm. sk.	Hamilton Is.	A. G. Wilday, Esq. [P.].
h. ♂ imm. sk.	Kiukiang, Feb.	F.W.Styan, Esq. [P.].
i–o. ♂ ad. sk.	Shanghai, Feb., Oct.	F.W.Styan, Esq. [P.].
p. ♂ ad. sk.	Hong-kong.	'Challenger' Exped.
q. ♂ ad. sk.	Hong-kong, March.	Gould Coll.
r–u. ♂ ad. et imm. sk.	Japan.	Exchanged.
v–x. ♂ ad. sk.	Hakodadi, Aug.	Seebohm Coll.
y. ♂ ad. sk.	Bhootan (*Pemberton*).	India Museum [P.].

3. Coturnix coromandelica.

Coromandel Quail, *Lath. Gen. Syn.* ii. pt. ii. p. 789 (1783); *id. Gen. Hist.* viii. p. 310 (1823).
Tetrao coromandelicus, *Gmel. S. N.* i. pt. ii. p. 764 (1788).
Perdix coromandelica, *Lath. Ind. Orn.* ii. p. 654 (1790); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 260 (1817).
Coturnix coromandelica, *Bonn. Tabl. Encycl. Méth.* i. p. 221 (1791); *Gray, List of B.* pt. iii. *Gall.* p. 38 (1844); *id. Gen. B.* iii. p. 507 (1846); *id. Cat. Hodys.* ed. i. p. 128 (1846); *Gould, B. Asia*, vii. pl. 9 (1854); *Adams, P. Z. S.* 1858, p. 504; *Irby, Ibis*, 1861, p. 237 [Oudh, Kumaon]; *Jerd. B. Ind.* iii. p. 588 (1863); *Gray, List Gallinæ Brit. Mus.* p. 60 (1867); *id. Hand-l. B.* ii. p. 268 (1870); *Hume, Str. F.* i. p. 227 (1873) [Sindh]; *Adam, Str. F.* i. p. 393 (1873) [Sambhur Lake]; *Hume, Nests & E. Ind. B.* p. 550 (1873); *Hume, Str. F.* iii. p. 178 (1875) [Pegu]; *Ball, Str. F.* iii. p. 294 (1875) [Chota Nagpur]; *Le Mess. Str. F.* iii. p. 379 (1875) [Sindh]; *Butler, Str. F.* iv. pp. 7, 39 (1876) [Mt. Aboo, N. Guzerat]; *Fairb. Str. F.* iv. p. 262 (1876) [Deccan]; *Davidson & Wenden, Str. F.* vii. p. 87 (1878) [Deccan]; *Ball, Str. F.* vii. p. 226 (1878) [Ganges to Godaveri]; *Cripps, Str. F.* vii. p. 298 (1878) [Faridpur]; *Butl. Cat. B. Sind, etc.* p. 55 (1879); *Hume & Marsh. Game B. Ind.* ii. p. 152, pl. (1879); *Vidal, Str. F.* ix. p. 76 (1880) [S. Konkan]; *Butler, Str. F.* ix. p. 423 (1880); *id. Cat. B. S. Bombay*, p. 70 (1880); *Reid, Str. F.* x. p. 63 (1881) [Lucknow]; *Oates, Str. F.* x. p. 236 (1882) [Thayetmyo & Bassein]; *Davidson, Str. F.* x. p. 317 (1882) [W. Khandeish]; *Davison, Str. F.* x. p. 411 (1883) [Nilghiris, Wynaad, Mysore]; *Oates, B. Burmah*, ii. p. 333 (1883); *Swinh. & Barnes, Ibis*, 1885, p. 132 [Central India]; *Hume, Str. F.* xi. p. 310 (1888) [Assam, Chittagong, Manipur]; *Oates, ed. Hume's Nests & E. Ind. B.* iii. p. 444 (1890); *Grant, Ann. Mag. N. H.* (6) ix. pp. 168, 172 (1892).
Coturnix textilis, *Temm. Pig. et Gall.* iii. pp. 512, 742 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 365 (1819); *Less. Traité d'Orn.* p. 509, pl. 90. fig. 1 (1831); *Sykes, P. Z. S.* 1832, p. 152 [Deccan]; *Jard. Nat. Lib., Orn.* iv. p. 116, pl. viii. (1834).
Perdix textilis, *Temm. Pl. Col.* v. pl. 40 [no. 35] (1824); *Drapiez, Dict. Sci. Nat.* viii. p. 429, pl. fig. 1 (1842).
Perdix olivacea, *Buchan. P. Z. S.* 1831, p. 123 [India].
Coturnix textilis?, v. pluvialis, *Hodys. in Gray's Zool. Misc.* p. 85 (1844); *id. Icon. ined. in Brit. Mus.* nos. 119, 120.
Coturnix coromandelicus, *Blyth & Walden, Cat. Mamm. & B. Burma*, p. 151 (1875) [Upper Burmah].

Adult male. Differs from the male of *C. coturnix* chiefly in having the black pattern on the throat and neck more strongly marked; a large black patch covering the middle of the chest and breast; the feathers of the sides and flanks black, widely margined on the sides with white or buff, and the outer webs of the primaries uniform brown, never barred and marked with rufous or buff. Iris brown; bill dark horny; legs and feet pale flesh. Total length 5 inches, wing 3·5, tail 1·2, tarsus 1·05.

Adult female is very similar to the female of *C. coturnix*, but may be at once distinguished by having no buff or rufous bars or

mottling on the outer webs of the primaries as well as by its smaller size.

Young males differ from the adult in having the black anchor-mark on the throat smaller and less distinct, and the patch on the chest rudimentary or absent.

Hab. Greater part of the peninsula of India: Assam, Manipur, Chittagong, and Pegu. It is no doubt also found in Arrakan.

a. ♂ juv. sk.	Hydrabad, Sindh, Oct. (*E. A. Butler*).	Hume Coll.
b. ♀ ad. sk.	Deesa, Nov. (*E. A. Butler*).	Hume Coll.
c–e. ♂ ad. sk.	Sambhur, May, July (*R. M. Adam*).	Hume Coll.
f–n. ♂ ♀ ad. sk.	Punjab, Jan.–April.	Hume Coll.
o–q. ♀ ad. et ♂ nr. ad. sk.	Sultanpur, Gurgaon, May, June (*W. N. Chill*).	Hume Coll. Hume Coll.
r–b′. ♂ ad. et imm. sk.	Delhi.	Hume Coll.
c′–m′. ♂ ♀ ad. sk.	Etawah District.	Hume Coll.
n′. ♀ ad. sk.	Cawnpore, June.	Hume Coll.
o′–w′. ♂ ♀ ad. et imm. sk.	Futtehghur, July & Dec. (*A. Anderson*).	Seebohm Coll.
x′. ♂ imm. sk.	Oudh, Dec.	Hume Coll.
y′, z′. ♂ ad. sk.	Nepal.	B. H. Hodgson, Esq. [C.].
a″, b″. ♂ ♀ ad. sk.	E. Bengal.	Hume Coll.
c″, d″. ♂ ♀ ad. sk.	Calcutta, August (*W. T. Blanford*).	Hume Coll.
e″. ♀ ad. sk.	Maunbhoom, April (*R. C. Beavan*).	Tweeddale Coll.
f″–h″. ♂ ♀ ad. et ♂ imm. sk.	Raipur.	Hume Coll.
i″. ♂ ad. sk.	Saugor, August.	Hume Coll.
k″, l″. ♂ ad. sk.	Khandeish, April, May (*J. Davidson*).	Hume Coll.
m″, n″. ♀ ad. et ♂ imm. sk.	Deccan (*Sykes*).	India Museum [P.].
o″, p″. ♂ ♀ ad. sk.	Ahmednugger (*S. B. Fairbank*).	Tweeddale Coll.
q″. ♀ ad. sk.	Kalsi, S. Konkan, Feb. (*G. Vidal*).	Hume Coll.
r″–u″. ♂ ♀ ad. sk.	Belgaum, April, May (*E. A. Butler*).	Hume Coll.
v″. ♀ ad. sk.	Mysore, May (*W. Davison*).	Hume Coll.
w″–y″. ♂ ♀ ad. sk.	Madras.	Hume Coll.
z″–c³. ♂ ♀ ad. sk.	Madras, June (*R. G. W. R.*).	Tweeddale Coll.
d³, e³. ♂ ♀ ad. sk.	Godavery Valley, Mar., Apr.	Hume Coll.
f³. Imm. sk.	Secunderabad, Nov. (*G. M. Slaughter*).	Seebohm Coll.
g³. ♂ ad. sk.	[Assam] (*Griffiths*).	India Museum [P.].
h³. ♂ nr. ad. sk.	Manipur, March (*A. O. H.*).	Hume Coll.
i³. ♀ ad. sk.	Pegu.	W. T. Blanford, Esq. [P.].
k³. ♂ ad. sk.	Thayetmyo, April.	E. W. Oates, Esq. [C.].
l³. ♂ ad. sk.	Bassein, Feb. (*James*).	Hume Coll.

4. Coturnix delegorguei.

Coturnix delegorguei, *Deleg. Voy. Afr. Austr.* ii. p. 615 (1847); *Gray, Hand-l. B.* ii. p. 268 (1870); *Finsch & Hartl. Vög. Ost-Afr.* p. 591 (1870); *Gurney, ed. Anderss. B. Damaral.* p. 249 (1872) [Ondonga, Lake Ngami]; *Heugl. Orn. N.O.-Afr.* iii. p. 907 (1873); *Hartl. Abh. nat. Ver. Brem.* vii. p. 118 (1881) [Mahagi, W. of Albert Nyanza]; *Sharpe, in Oates' Matabele L.* p. 324 (1881) [Gubuleweyo]; *Bocage, Orn. Ang.* p. 412 (1881) [Mossamedes; Ambaca, N. of Quanza]; *Sclat. P. Z. S.* 1881, p. 259 [W. of Lake Albert Nyanza]; *Sharpe's ed. Layard's B. S. Afr.* p. 605 (1884); *Fisch. Zeit. ges. Orn.* i. p. 381 (1884) [Bondei]; *id. J. f. O.* 1885, p. 121 [Gelidja, Bondei]; *Reich. J. f. O.* 1887, p. 53 [Kawanga, Masai Steppes]; *Shelley, Ibis*, 1888, p. 303 [Kilimanjaro]; *Jackson, Ibis*, 1889, p. 583 [Kilimanjaro]; *Hartl. Abh. nat. Ver. Brem.* xii. p. 41 (1891) [Mandera]; *Grant, Ann. Mag. N. H.* (6) ix. pp. 168, 173 (1892); *Barnes, Ibis*, 1893, p. 168 [Aden].

Coturnix histrionica, *Hartl. Rev. et Mag. Zool.* i. p. 495 (1849) [St. Thomas Is.]; *id. Beitr. Orn. W.-Afr.* pp. 1, 38, pl. xi. (1852); *id. Syst. Orn. W.-Afr.* p. 204 (1857); *Layard, B. S. Afr.* p. 275 (1867); *Gray, List Gallinæ Brit. Mus.* p. 60 (1867); *Bocage, J. Acad. Lisb.* no. ii. p. 145 (1867) [St. Thomas Is.], v. p. 46 (1868) [R. Chimba], viii. p. 350 (1870) [Ambaca]; *Layard, Ibis*, 1869, p. 75 [Grahamstown and eastwards]; *Sharpe, P. Z. S.* 1869, p. 564, 1870, p. 147 [Ambriz, Quanza R.]; *Ayres, Ibis*, 1871, p. 262 [Mariqua R., Transvaal].

Coturnix fornasini, *Bianc. Spec. Zool. Mos.* fasc. xvi. p. 399, pl. i. fig. 2 (1850); *id. Mem. Acc. Sci. Bolog.* (2) iv. p. 521, pl. ii. fig. 2 (1865); *Guérin, Rev. Zool.* 1866, p. 316.

Coturnix crucigera, *Heugl. Vög. N.O.-Afr.* p. 51, no. 533 (1856); *id. Peterm. Geogr. Mitth.* 1869, p. 413.

Adult male. Differs chiefly from the male of *C. coturnix* in having the general colour of the upper parts, including the wing-coverts, blackish brown; the primaries uniform brown, never barred with rufous or buff; the black pattern on the throat more strongly marked; the general colour of the sides of the neck and rest of the underparts light chestnut; a large black patch in the middle of the chest and breast as in *C. coromandelica*, and the feathers of the sides and flanks black down the middle. Iris rich brown; bill black; legs and feet salmon-colour. Total length 6 inches, wing 3·7, tail 1·3, tarsus 1.

Adult female. Differs from the female of *C. coturnix* in the much darker colour of upper parts, in having the outer webs of the primaries uniform and the underparts rufous buff or dull chestnut, washed with dusky on the chest, most of the feathers with a pale dark-edged shaft-stripe, and the feathers of the sides mottled and barred with black and buff.

Hab. Africa, south of about 15° N. lat., recently obtained at Aden (*Barnes*).

a. ♂ ad. sk.	Island of St. Thomas, Aug.	Lisbon Museum [P.].
b. ♂ ad. sk.	Island of St. Thomas, Oct. (*J. J. Monteiro*).	Sharpe Coll.

c, *d*. ♀ ad. sk.	Landana, Sept.	M. L. Petit [C.].
e. ♂ ad. sk.	Kattenbella, Benguela, Nov. (*Sala*).	Sharpe Coll.
f, *g*. ♂ ad. sk.	Kingwilliamstown.	Major H. Trevelyan [P.].
h. ♂ ad. sk.	Natal.	Tweeddale Coll.
i–l. ♂ ♀ ad. sk.	Gubuleweyo, Dec., Jan. (*F. Oates*).	W. E. & C. G. Oates, Esqs. [P.].
m. ♀ ad. sk.	Makara R., Jan. (*J. S. Jameson*).	Shelley Coll.
n, *o*. ♂ ♀ ad. sk.	Makalaka Country.	Dr. Bradshaw [C.].
p. ♀ ad. sk.	Tete (*Sir John Kirk*).	Livingstone Exped. [P.].
q. ♂ ad. sk.	Mahagi, Eq. Africa, Dec. (*Emin*).	Shelley Coll.
r. ♂ ad. sk.	Lamu, Sept.	F. J. Jackson, Esq. [P.].
s. ♂ ad. sk.		Shelley Coll.
t. ♂ ad. sk.	Aden.	Lieut. H. E. Barnes [P.].

5. Coturnix pectoralis.

Austral Partridge, *Lath. Gen. Hist.* viii. p. 308 (1823).

Coturnix pectoralis, *Gould*, *P. Z. S.* 1837, p. 8 [N. S. Wales]; *id. Syn. B. Austr.* text & pl. fig. 1 (1837–8); *Gray*, *List of B.* pt. iii. *Gall.* p. 40 (1844); *id. Gen. B.* iii. p. 507 (1846); *Gould*, *B. Austr.* v. pl. 88 [text] (1848); *id. Handb. B. Austr.* ii. p. 190 (1865); *Ramsay*, *Ibis*, 1866, p. 334 [Port Denison]; *Gray*, *List Gallinæ Brit. Mus.* p. 61 (1867); *Diggles*, *B. Austr.* ii. pt. xv. pl. 95 [text] (1867); *Gray*, *Hand-l. B.* ii. p. 268 (1870); *Ramsay*, *P. Linn. Soc. N. S. W.* i. p. 185 (1876), ii. p. 196 (1877) [distribution]; *id. Tab. List Austr. B.* p. 19 (1888); *North*, *N. & E. B. Austr.* p. 289 (1889); *Grant*, *Ann. Mag. N. H.* (6) ix. pp. 168, 173 (1892).

Synoicus australis, *Ramsay*, *Ibis*, 1865, p. 86 [Port Denison].

Adult male. Upper parts as in the male of *C. coturnix*, but somewhat darker, especially on the wing-coverts; superciliary stripes, sides of head, chin, throat, and fore part of neck uniform dull brick-red, without any black markings; a black patch in the middle of the chest; feathers on the sides of the chest, breast, and belly white, with a black stripe down the shaft; sides and flanks very similar to those of *C. coturnix*. The outer webs of the primaries are uniform brown, not barred and marked with buff. Iris hazel; bill black; legs and feet pearly vinous white. Total length 7 inches, wing 4·1, tail 1·5, tarsus ·9.

Adult female. Upper parts darker than in the female of *C. coturnix*; sides of the head and throat whitish buff dotted with black; feathers of the chest and breast with a black curved submarginal bar on either side of the shaft, not confluent at the extremity, but separated by a wide buff isthmus; sides of the belly with longitudinal lines and spots of black. Bill olive.

In *younger male* specimens the sides of the face and throat are paler, the black patch on the breast is not developed, and the outer edge of the outer web of the primaries is slightly mottled with buff.

Hab. Australia; Tasmania.

a, b. ♂ ♀ ad. sk.	Australia.	Sir E. Sabine [P.].
c. ♂ ad. sk.	Australia.	Hardwicke Bequest.
d–f. ♂ ♀ ad. sk.	Somerset, Cape York (*Cockerell & Thorpe*).	Salvin-Godman Coll.
g. ♂ ad. sk.	New South Wales.	Gould Coll.
h. ♂ ad. sk.	Melbourne.	Tweeddale Coll.
i. ♀ ad. sk.	South Australia.	C. D. E. Fortnum, Esq. [P.].
k, l. ♂ ♀ ad. sk.	South Australia.	Sir G. Grey [P.].
m–p. ♂ ad., ♂ imm., et ♀ ad. sk.	South Australia.	Seebohm & Gould Colls.
q. ♀ ad. sk.	Murray River.	Sir G. Grey [P.].
r. ♂ ad. sk.	Tasmania.	Ronald Gunn, Esq. [P.].
s. ♀ ad. sk.	Tasmania.	Lords of the Admiralty [P.].

6. Coturnix novæ-zealandiæ.

Coturnix novæ zealandiæ, *Quoy & Gaim. Voy. Astrol., Zool.* i. p. 242, pl. 24. fig. 1 (1830); *Gould, Syn. B. Austr.* text & pl. fig. 2 (1837–8); *Dieffenb. Trav. N. Zeal.* ii. p. 195 (1843); *Gray, Gen. B.* iii. p. 507 (1846); *Ellman, Zool.* 1861, p. 7468; *Haast, Ibis*, 1862, p. 102; *Gray, Ibis*, 1862, p. 233 [N. & S. Islands]; *id. List Gallinæ Brit. Mus.* p. 61 (1867); *Haast, J.f. O.* 1868, p. 243; *Gray, Hand-l. B.* ii. p. 268 (1870); *Finsch, J. f. O.* 1870, p. 334; *Hutton, Ibis*, 1870, p. 398 [Auckland; rare]; *Potts, Tr. N. Zeal. Inst.* ii. art. viii. p. 66 (1870), iii. art. xi. p. 92 (1871); *Hutton, Cat. B. N. Zeal.* p. 22 (1871); *Finsch, J.f. O.* 1872, p. 168; *Potts, Trans. N. Z. Inst.* v. art. xx. p. 185 (1873); *Buller, B. New Zeal.* p. 161, pl. (1873); *Finsch, J.f. O.* 1874, pp. 172, 193; *Sharpe, App. Voy. Ereb. & Terr., Birds*, pp. 10, 27, pl. 8 (1875); *Buller, Man. B. N. Zeal.* p. 43, pl. xix. (1882); *id. Hist. B. N. Zeal.* i. p. 225, pl. xxiii. (1888); *Evans, Ibis*, 1891, p. 75; *Grant, Ann. Mag. N. H.* (6) ix. pp. 168, 173 (1892).

Adult male. Very similar to *C. pectoralis* in general appearance, but the general colour of the upper parts is warmer and more intermixed with rufous buff; the sides of the head, chin, and throat only are brighter brick-colour, and there is a black band, as it were the arm of the anchor-mark, on each side of the throat, while the fore part of the neck resembles the chest and middle of the breast, which, in what appears to be a very old male, are mostly black with irregular buff spots and markings near the extremity of the margin, while in another adult male specimen these parts are black, irregularly barred and tipped with whitish buff. The rest of the underparts are much more thickly marked with black. Iris hazel; bill black; legs and feet pale flesh-brown. Total length 7·6 inches, wing 4·6, tail 1·8, tarsus 1.

Adult female. The upper parts resemble those of the male; on the under surface the plumage is similar to that of the adult female of *C. pectoralis*, but the black bars on the feathers of the chest and breast are confluent, or very nearly so, and form W-shaped markings; on the rest of the underparts the black markings are stronger and more numerous.

Younger males resemble the females, but the throat resembles that of the male adult, and the black markings on the underparts are much wider and more completely fused in the median line, assuming a V-shaped form.

Hab. New Zealand (said to be nearly extinct).

a. ♂ ad. sk.	New Zealand.	Sir G. Grey [P.].
b. ♂ nr. ad. sk.	New Zealand.	Percy Earl, Esq. [C.].
c, d. ♂ imm., ♀ ad. sk.	New Zealand (*A. Dundas*).	Zool. Soc. Coll.
e, f. ♂ imm., ♀ ad. sk.	Port Cooper (*F. Strange*).	Capt. Stokes, R.N. [P.].
g. ♀ ad. sk.	Port Cooper (*F. Strange*).	Gould Coll.

19. SYNŒCUS.

	Type.
Synoicus, *Gould, B. Austr.* v. pl. 89, or pt. xii. (1843) ..	S. australis.
Synaecus, *Agass. Index Universalis*, p. 358 (1846)	S. australis.
Synœcus, *Müll. P. Z. S.* 1869, p. 280	S. australis.

1st primary is about equal to the 4th and somewhat shorter than the 3rd, which is the longest.

Tail composed of 10 (rarely 12) feathers, feeble, rounded; outer feathers much shorter than the middle pair, which are less than half the length of the wing.

Axillaries short, grey.

Tarsus without spurs.

Range. Australia, New Guinea, Timor, and Flores.

Key to the Species.

A. Sides of the crown not mostly black; upper parts not blotched with black, or with the black markings present in the form of moderate bars; shaft-stripes narrower, confined to the shaft itself. (*Males.*)
  a. Chin and throat dirty white ..... *australis*, p. 247.
  b. Chin and throat dull rufous ..... *raalteni*, p. 249.
B. Sides of the crown black or mostly black; upper parts coarsely blotched with black; shaft-stripes wider than the shafts themselves. (*Females.*)
  c. Chest pale rufous buff, barred all over with black. *australis*, p. 247.
  d. Chest pale, dull rufous, with black bars nearly obsolete ..... *raalteni*, p. 249.

The common Australian Swamp-Quail (*Synœcus australis*) has been divided by Gould into no less than four species, which are apparently founded on differences of age or sex. As he has not given comparative diagnoses, it is impossible to see from his descriptions in what particulars his supposed species differ. He was himself aware that his distinctions were weak and far from satisfactory,

for while describing his fourth species (*S. cervinus*) he remarks: "the Swamp-Quails of Australia must either be regarded as constituting but one or several species—a point which must be left for future investigation."

Besides the differences of plumage, individuals differ considerably one from another in size, though this is of little or no importance. Having had the advantage of examining a comparatively large series of these birds from all parts of their range, I am perfectly satisfied that there is only one species. The changes in the plumage of the upper parts are very similar to those found in *Excalfactoria chinensis*.

1. Synœcus australis.

New Holland Quail, *Lath. Gen. Syn. Suppl.* ii. p. 283 (1802); *id. Gen. Hist.* viii. p. 306 (1823).

Coturnix australis, *Temm. Pig. et Gall.* iii. pp. 474, 740 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 373 (1819); *Vieill. Tabl. Encycl. Méth.* i. p. 368, pl. 237. fig. 2 (1823); *Gould, Syn. B. Austr.* text & pl. (1837–8); *Gray, List of B.* pt. iii. *Gall.* p. 39 (1844); *id. Gen. B.* iii. p. 507 (1846).

Perdix australis, *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 262 (1817); *id. Gal. Ois.* ii. p. 46, pl. ccxv. (1825).

Dwarf Partridge, p. 305 [♂], *and* Elegant Quail, p. 306 [♀], *Lath. Gen. Hist.* viii. p. 306 (1823).

Synoicus sordidus, *Gould, P. Z. S.* 1847, p. 33 [S. Australia]; *id. B. Austr.* v. pl. 91 [text] (1848); *id. Handb. B. Austr.* ii. p. 195 (1865); *Ramsay, P. Linn. Soc. N. S. W.* i. p. 186 (1876), ii. p. 196 (1877) [distribution]; *Masters, P. Linn. Soc. N. S. W.* ii. p. 275 (1877) [Port Darwin]; *Ramsay, Tab. List Aust. B.* p. 19 (1888).

Synoicus diemenensis, *Gould, P. Z. S.* 1847, p. 33 [Tasmania]; *id. B. Austr.* v. pl. 90 [text] (1848); *id. Handb. B. Austr.* ii. p. 194 (1865); *Ramsay, P. Linn. Soc. N. S. W.* i. p. 185 (1876), ii. p. 196 (1877) [distribution]; *id. Tab. List Aust. B.* p. 19 (1888); *North, N. & E. B. Austr.* p. 290 (1889).

Synoicus australis, *Gould, B. Austr.* v. pl. 89 [text] (1848); *id. Handb. B. Austr.* ii. p. 193 (1865) [N. S. Wales, S. Australia, Tasmania]; *Diggles, B. Austr.* ii. pt. xx. pl. 96 [text] (1868); *Ramsay, P. Z. S.* 1876, p. 119 [N.E. Queensland]; *id. P. Linn. Soc. N. S. W.* i. pp. 185, 219 (1876), ii. p. 196 (1877) [distribution]; *id. Tab. List Aust. B.* p. 19 (1888); *North, N. & E. B. Austr.* p. 289 (1889).

Synoicus cervinus, *Gould, Handb. B. Austr.* ii. p. 195 (1865); *Ramsay, P. Linn. Soc. N. S. W.* i. pp. 186, 384, 394 (1876), ii. p. 196 (1877), iii. p. 296 (1878), iv. p. 101 (1879) [distribution]; *id. Tab. List Aust. B.* p. 19 (1888); *North, N. & E. B. Austr.* p. 291 (1889).

Coturnix (Synoicus) australis, *Gray, List Gallinæ Brit. Mus.* p. 61 (1867); *id. Hand-l. B.* ii. p. 268 (1870).

Synœcus australis, *Müll. P. Z. S.* 1869, p. 280 [Melbourne].

Synœcus diemenensis, *Müll. P. Z. S.* 1869, p. 280 [Melbourne].

Coturnix (Synoicus) sordidus, *Gray, Hand-l. B.* ii. p. 268 (1870).

Coturnix (Synoicus) diemenensis, *Gray, Hand-l. B.* ii. p. 268 (1870).

Coturnix (Synoicus) cervinus, *Gray, Hand-l. B.* ii. p. 268 (1870).

Synœcus cervinus, *Sharpe, J. Linn. Soc.* xiii. p. 504 (1877) [S.E. New Guinea]; *Forbes, P. Z. S.* 1878, pp. 121, 127 [Cape York & Booby Is.]; *id. Voy. Chall., Birds*, pp. 84, 92 (1880); *Salvad. Orn. Pap.* iii. p. 254 (1882) [Pole Is.].

Adult male. In *very old examples*—that is, in birds of *three years old* or *more* (*S. sordidus*, Gould)—most of the markings on the upper and underparts disappear, and there is a general tendency to uniformity of colour in the plumage. The feathers of the upper parts are reddish brown on the sides, and dull grey down the middle, with only a few fine mottlings of black; while the white shafts so conspicuous in younger examples are scarcely apparent; on the underparts the buff feathers are grey down the middle, and the V-shaped black bars are nearly obsolete; the superciliary stripes and sides of the head and throat are dull grey; the outer webs of the quills indistinctly mottled with rufous, and the tail-feathers uniform grey.

In birds of the *second year* (typical *S. australis*) the upper parts are mottled with black and barred with rufous, and the narrow white shafts of the feathers are clearly marked; the outer webs of the quills thickly mottled with rufous; the superciliary stripes, sides of the head, and throat pale vinaceous white; the feathers of the underparts buff, each with a series of V-shaped cross-bars; and the tail-feathers black, barred with buff. Total length about 7·5 inches, wing 3·5–4·2, tail 1·7–2·0, tarsus 0·9.

A quite young male has most of the plumage of the upper parts like that of the adult female, but on the sides of the mantle numerous feathers of the second year (or *S. australis* stage of plumage) are moulting in.

Adult female differs from the male in having the black markings and patches on the upper and underparts much coarser; the centres of the feathers are not grey, and the shaft-stripes, which are much wider than in the male, are pale buff.

Hab. South-eastern New Guinea, Australia, Tasmania.

a. ♂ ad. sk.	Port Moresby, S.E. New Guinea.	A. Goldie, Esq. [C.].
b. ♂ ad. sk.	Astrolabe Mts.	H. H. Romilly, Esq. [P.].
c. ♂ ad. sk.	Australia.	Tweeddale Coll.
d. ♂ ad. sk.	Australia.	J. B. Jukes, Esq. [P.].
e, f. ♂ ♀ ad. sk.	N.W. Australia.	Capt. Bowyer Bower [P.].
g. ♂ ad. sk.	Port Essington.	Gould Coll.
h. ♂ ad. sk.	Cape York Is.	'Challenger' Exped.
i, k. ♂ ♀ ad. sk.	Cape York Is. (*Cockerell & Thorpe*).	Tweeddale & Gould Colls.
l–n. ♂ ♀ ad. sk.	Somerset, Cape York (*Cockerell & Thorpe*).	Salvin-Godman Coll.
o, p. ♂ imm. et ♀ ad. sk.	Boar Pocket, N. Queensland, April.	Lord Leigh [P.].
q–s. ♂ ♀ ad. sk.	Moreton Bay.	Gould Coll.

t. ♂ ad. sk.	Richmond River.	A. P. Goodwin, Esq. [C.].
u–x. ♂ ♀ ad. sk.	New S. Wales.	Gould Coll.
y. ♀ ad. sk.	New S. Wales.	Hume Coll.
z, *a'*. ♀ ad. sk.	Murray River.	Sir G. Grey [P.].
b'. ♀ ad. sk.	S. Australia.	Sir G. Grey [P.].
c'–e'. ♀ ad. et pull. sk.	S. Australia.	Gould Coll.
f'. ♂ ad. sk.	Adelaide.	Gould Coll.
g'. ♂ ad. sk.	Melbourne, Victoria.	Tweeddale Coll.
h'. ♀ ad. sk.	Tasmania.	Gould Coll.
i', *k'*. ♀ ad. sk.	Tasmania.	Hume Coll.
l'. ♂ ad. sk.	Hobart Town, Oct.	Gould Coll.

2. Syncœus raalteni.

Perdix raaltenii, *Müll. & Schl. Land- en Volkenk.* p. 158 (1839–44); *Gray, Gen. B.* iii. p. 506 (1846); *Blyth, Ibis*, 1867, p. 160.
Coturnix raaltenii, *Wall. P. Z. S.* 1863, p. 486 [Timor; Flores].
Coturnix (Synoicus) raalteni, *Gray, List Gallinæ Brit. Mus.* p. 62 (1867); *id. Hand-l. B.* ii. p. 269 (1870).

Adult male. In the *oldest example* the feathers of the upper parts are rufous with grey centres, very faintly mottled or dotted with black, and with mere indications of white shaft-stripes; the top of the head reddish brown; quills brown, washed and mottled with pale rufous on the outer web; sides of head, chin, throat, and rest of underparts dull rufous, most of the feathers with pale buff at the extremity of the shaft, those of the sides and flanks with traces of dark bars; tail brown, indistinctly mottled with buff.

In a *somewhat less mature bird* the pale shaft-stripes on the upper parts are much more distinct; and the feathers of the lower breast, belly, sides, and flanks are distinctly barred with black.

Total length 7·4 inches, wing 3·5–3·8, tail 1·5–1·7, tarsus 0·95.

Adult female. Differs from the male in having the whole of the upper parts blotched and marked with black, while the shaft-stripes are much wider and more distinct; the chin and throat are whitish buff, and the rest of the underparts are washed with pale rufous and much more strongly barred with black.

Hab. Islands of Timor and Flores.

a–c. ♂ ♀ ad. sk.	E. Timor.	A. R. Wallace, Esq. [C.].

20. EXCALFACTORIA.

	Type.
Excalfactoria, *Bonap. C. R.* xlii. p. 881 (1856).....	E. chinensis.
Compsortyx, *Heine, Nomencl. Mus. Hein.* p. 290 (1890).	E. chinensis.

Tail composed of 8 very short, soft feathers, entirely hidden by the upper tail-coverts and less than half the length of the wing.

Wing as in *Coturnix*; the 1st primary slightly shorter than the 2nd and equal to the 3rd, which is slightly the longest.

Tarsi without spurs.

Range. Indo-Chinese countries to Australia.

Key to the Species.

I. A black triangular patch on the chin and middle of the throat. (*Males.*)
  A. Wing-coverts and scapulars sandy brown, washed with slate-grey; the outer median coverts, with or without the outer webs, bright chestnut.
    a. Middle of the chest and breast brightchestnut. *chinensis*, p. 250.
    b. Chest and breast uniform slate-blue..... *lepida*, p. 254.
  B. Wing-coverts and scapulars chestnut, with a slate-grey stripe down the shaft of each ..... *adansoni*, p. 255.
II. No black on the middle of the chin and throat; underparts buff, barred with black. (*Females.*)

1. Excalfactoria chinensis.

The Chinese Quail, *Edw. Glean. Nat. Hist.* v. p. 77, pl. 247 (1758) *Lath. Gen. Syn.* ii. pt. ii. p. 783 (1783); *id. Gen. Hist.* viii. p. 318 (1823).

Tetrao chinensis, *Linn. S. N.* i. p. 277 (1766); *Gm. S. N.* i. pt. ii. p. 765 (1788).

Perdix chinensis, *Lath. Ind. Orn.* ii. p. 652 (1790); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 260 (1817).

Coturnix sinensis, *Bonn. Tabl. Encycl. Méth.* i. p. 223, pl. 96. fig. 3 (1791).

Coturnix excalfactoria, *Temm. Pig. et Gall.* iii. pp. 516, 742 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 371 (1819).

Coturnix flavipes, *Blyth, J. As. Soc. Beng.* xi. p. 808 (1842); *Gray, Gen. B.* iii. p. 507 (1846).

Coturnix chinensis, *Gray, List of B.* pt. iii. p. 39 (1844); *id. Cat. Hodgs.* ed. i. p. 128 (1846); *id. Gen. B.* iii. p. 507 (1846); *Layard, Ann. Mag. N. H.* (2) xiv. p. 107 (1854) [Ceylon]; *Swinhoe, Ibis*, 1861, p. 50 [Canton Dist.]; *Legge, B. Ceylon*, iii. p. 755 (1880); *Parker, Ibis*, 1886, p. 187 [Tissa, Ceylon].

Coturnix philippensis, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844); *id. Icon. ined. in Brit. Mus.* nos. 119, 120.

Excalfactoria chinensis, *Bonap. C. R.* xlii. p. 881 (1856); *Maillard, Notes Réunion*, p. 163 (1862); *Jerd. B. Ind.* iii. p. 591 (1863); *Swinhoe, Ibis*, 1863, p. 398; *id. P. Z. S.* 1863, p. 308 [Formosa]; *Gould, B. Asia*, vii. pl. 6 (1867); *Beavan, Ibis*, 1868, p. 386 [Maldah, Lower Bengal]; *Swinh. Ibis*, 1870, p. 360 [Hainan]?; *id. P. Z. S.* 1871, p. 401 [S. China]; *Holdsw. P. Z. S.* 1872, p. 470 [Ceylon]; *Hume, Nests & E. Ind. B.* p. 553 (1873); *Ball, Str. F.* ii. p. 428 (1874) [Chota Nagpur]; *Legge, Ibis*, 1874, p. 26 [S. Ceylon]; *Hume, Str. F.* iii. p. 323 (1875) [Pakchan]; *Oates, Str. F.* iii. p. 345 (1875) [Pegu plains]; *Blyth & Walden, Cat. Mamm. & B. Burma*, p. 151 (1875) [Arrakan, Tenasserim, Malay Pen.]; *David & Oustal. Ois. Chine*, p. 397 (1877); *Ball, Str. F.* vii. p. 226 (1878) [Raipur]; *Hume, Str. F.* viii. p. 69 (1879) [Nealys, Malacca]; *Oates, Str. F.* viii. p. 167 (1879) [Pegu]; *Hume & Marsh. Game B. Ind.* ii. p. 162, pl. (1879); *Bidie, Str. F.* ix. p. 209 (1880) [Chingleput Dist., Madras]; *Hume & Inglis, Str. F.* ix. p. 258 (1880) [Dilkhushah, Cachar]; *Butler, Str. F.* ix. p. 423 (1880) [Bombay]; *Reid, Str. F.* x. p. 63 (1881) [Lucknow]; *Wenden, Str. F.* x. p. 165 (1881) [Bombay, Poona]; *Oates, Str.*

F. x. p. 236 (1882) [Lower Pegu]; *Davison, Str. F.* x. p. 412 (1883) [Wynaad, Rampur, Mysore]; *Kelham, Ibis*, 1882, p. 3 [Malay States]; *Oates, B. Burmah*, ii. p. 334 (1883); *Müll. J. f. O.* 1885, p. 160 [Salanga Is.]; *Hume, Str. F.* xi. p. 310 (1888) [Assam, Cachar, Sylhet, Manipur]; *Harterl, J. f. O.* 1889, p. 434; *Oates, ed. Hume's Nests & E. Ind. B.* iii. p. 448 (1890).

Excalfactoria minima, *Gould, P. Z. S.* 1859, p. 128 [Celebes]; *id. B. Asia*, vii. pl. 7 (1867); *Walden, Tr. Z. S.* viii. p. 87 (1872), ix. p. 224 (1875); *Salvad. Ann. Mus. Civ. Genov.* vii. p. 675 (1875), xviii. p. 9 (1882); *id. Orn. Pap.* iii. p. 255 (1882); *Pleske, Bull. Acad. Pétersb.* xxix. p. 536 (1884) [Ternate]; *Salvad. Agg. Orn. Pap.* pt. iii. p. 195 (1891).

Synœcus sinensis, *Newton, Ibis*, 1861, pp. 116, 275 [Mauritius].

Coturnix caineana, *Swinh. Ibis*, 1865, pp. 351, 542 [Swatow]; *id. Ibis*, 1870, p. 360.

Coturnix (Excalfactoria) chinensis, *Gray, List Gallinæ Brit. Mus.* p. 63 (1867); *id. Hand-l. B.* ii. p. 269 (1870).

Coturnix (Excalfactoria) minima, *Gray, List Gallinæ Brit. Mus.* p. 63 (1867); *id. Hand-l. B.* ii. p. 269 (1870).

Excalfactoria sinensis, *Hume & Davison, Str. F.* vi. p. 447 (1878) [Pakchan, Malawoon]; *Bingham, Str. F.* ix. p. 196 (1880) [Kaukaryit, Moulmein, Thoungyeen].

? Excalfactoria sp., *Salvad. Orn. Pap.* iii. p. 257 (1882).

Adult male. Middle of the head, nape, back, and rump brown, with vermiculations and subterminal bars and blotches of black: most of the feathers below the nape with whitish shafts, widest on the lower back and rump. (In very old examples the shaft-stripes entirely disappear.) Forehead, sides of the crown and head and neck, lesser and median wing-coverts, and upper tail-coverts more or less washed with dark slate-blue. Outer webs and ends of the outer median wing-coverts bright chestnut. Primaries, secondaries, and their coverts brown; the outer webs of the secondaries and of their coverts sandy, faintly vermiculated with brownish; a white band from the nostril to the eye; chin and throat black, a white band edged with black on either side; fore part of the neck white, edged with black; upper part of the chest, sides of the breast, sides and flanks slate-blue, rest of the underparts rich chestnut. (In very old specimens the chestnut on the underparts gradually takes the place of the slate-blue till very little of the latter remains.) Tail chestnut. Total length 5·2 inches, wing 2·8, tail 1·1, tarsus ·8.

Younger males have the general colour of the upper parts browner than in the adult, the black markings larger and more numerous, and almost all the feathers with a pale buff or white shaft-stripe; down the middle and along either side of the head the shaft-stripes of the feathers form pale bands. The wing-coverts resemble the plumage of the back, and only one or two show traces of chestnut on the margins of the outer webs; the edges of the black and white markings on the throat and neck are less sharply defined. On the underparts the slate-blue predominates, and on the sides and flanks is mixed with sandy and spotted with black. Tail slate-blue, edged with chestnut.

Adult female. Upper surface resembles that of the young male, but the forehead, wide superciliary stripes, and cheeks are rufous buff; the chin, throat, and fore part of the neck are white, shading into rufous buff towards the sides; rest of underparts buff, paler towards the middle of the breast and belly; chest, sides, and flanks barred with black. (In very old examples the barring on the chest nearly disappears.)

Immature females have the feathers of the upper breast and sides spotted. As age increases these spots resolve themselves into transverse black bars.

Hab. Ceylon, Indian Peninsula, the Indo-Chinese countries, Formosa, Celebes, Ternate; ? Hainan.

a. ♀ imm. sk.	Ceylon (*H. Nevill*).	Tweeddale Coll.
b. ♀ ad. sk.	Rampur, Mysore Roads, May (*W. Davison*).	Hume Coll.
c, *d*. ♀ ad. et ♂ imm. sk.	Raipur, Feb. and April.	Hume Coll.
e. ♂ ad. sk.	Lucknow, Oudh, Aug. (*G. Reid*).	Hume Coll.
f, *g*. ♀ ad. et ♂ imm. sk.	Fyzabad.	Hume Coll.
h–*p*. ♂ ♀ ad. et imm. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
q–*t*. ♂ ♀ ad. et imm. sk.	Darjeeling.	Tweeddale Coll.
u. ♂ ad. sk.	Darjeeling (*Pearson*).	India Museum [P.].
v. ♂ imm. sk.	Bhotan Doars, Feb. (*L. Mandelli*).	Hume Coll.
w. ♂ ad. sk.	Dacca.	Hume Coll.
x–*b'*. ♂ imm. sk.	Suddya, Assam, April and May (*J. Cockburn*).	Hume Coll.
c'. ♀ ad. sk.	Dibrughur, April (*A. W. Chennell*).	Tweeddale Coll.
d', *e'*. ♀ imm. sk.	Shillong, Dec. (*J. Cockburn*).	Hume Coll.
f'. ♂ ad. sk.	Khasia Hills, July.	Hume Coll.
g', *h'*. ♀ ad.; ♂ imm. sk.	Manipur, March (*A.O.H.*).	Hume Coll.
i'. ♂ ad. sk.	Tonghoo, Sept. (*R. G. W. R.*).	Tweeddale Coll.
j'–*n'*. ♀ ad. et ♂ imm. sk.	Lower Pegu, May, July, Sept., Oct.	E. W. Oates, Esq. [C.].
o'. ♀ ad. sk.	Malawoon, Tenasserim, Jan. (*W. Davison*).	Hume Coll.
p', *q'*. ♂ ad. sk.	Pakchan, Jan. (*W. D.*).	Hume Coll.
r', *s'*. ♂ ad. sk.	Province Wellesley, Dec.	Dr. A. McKinlay [P.].
t'–*e''*. ♂ ♀ ad. et imm. sk.	Penang (*Cantor*).	India Museum [P.].
f''. ♂ ad. sk.	Qualla Lompoh, Salangore, May (*W. Davison*).	Hume Coll.
g''–*d*^{3}. ♂ ♀ ad. et imm. et juv. sk.	Klang, Salangore, Feb.–July (*W. Davison*).	Hume Coll.
e^3, *f*^{3}. ♂ ad. sk.	Neealys, 31 miles from Malacca, Oct. (*W. D.*).	Hume Coll.

g^3–k^3. ♂ ♀ ad. sk.	Malacca, July.	Hume Coll.
l^3–o^3. ♂ ♀ ad. sk.	Malacca (*Dr. Maingay*).	Tweeddale Coll.
p^3, q^3. ♀ ad. sk.	Malacca (*Dr. Cantor*).	India Museum.
r^3. ♂ ad. sk.	Malacca.	Capt. Stackhouse Pinwill [P.].
s^3. ♂ ad. sk.	Singapore.	Gould Coll.
t^3–a^4. ♂ ♀ ad. et imm. sk.	Singapore Is., Oct., Nov. (*W. Davison*).	Hume Coll.
b^4, c^4. ♀ ad. et ♂ imm. sk.	China.	J. R. Reeves, Esq. [P.].
d^4. ♂ imm. sk.	Takow, Formosa, Dec. (*R. Swinhoe*).	Seebohm Coll.
e^4–h^4. ♀ ad. et ♂ imm. sk.	Makassar, Celebes.	A. R. Wallace, Esq. [C.]. (Types of *E. minima*, Gould.)

Subsp. *a*. Excalfactoria lineata.

Coturnix philippensis, *Briss. Orn.* i. p. 254, pl. xxv. fig. 1 (1760).
La Caille des Philippines, *D'Aubent. Pl. Enl.* ii. pl. 51. [no. 126] fig. 2.
La Petite Caille de l'Isle de Luçon, *Sonnerat, Voy. N. Guin.* p. 54, pl. 24 (1776).
Manilla Quail, *Lath. Gen. Syn.* ii. pt. ii. p. 790 (1783); *id. Gen. Hist.* viii. p. 321 (1823).
Oriolus lineatus, *Scop. Del. Flor. et Faun. Insubr.* ii. p. 87 (1786).
Tetrao manillensis, *Gmel. S. N.* i. pt. ii. p. 764 (1788).
Perdix manillensis, *Lath. Ind. Orn.* ii. p. 655 (1790).
Coturnix manillensis, *Bonn. Tab. Encycl. Méth.* i. p. 221, pl. 97. fig. 4 (1791).
Tetrao chinensis, *Hayes, Osterl. Menag.* pl. 50 [text] (1794).
Tetrao sinensis, *Raffl. Tr. Linn. Soc.* xiii. p. 324 (1822) [Sumatra].
Chestnut-bellied Partridge [♂], Undulated Partridge [♀], *Lath. Gen. Hist.* viii. p. 305 (1823).
Coturnix nana, *Schinz, Nat. Abbild. Vög.* p. 275 (1833).
Synoicus? chinensis, *Gould, B. Austr.* v. pl. 92 [text] (1848); *Diggles, B. Austr.* ii. pt. xx. pl. 96 [text] (1868).
Coturnix chinensis, *Sclat. P. Z. S.* 1863, p. 221 [Borneo].
Excalfactoria chinensis, ? *Walden & Layard, Ibis*, 1872, p. 106 [Negros]; *Salvad. Ucc. Borneo*, p. 311 (1874); *Walden, Tr. Z. S.* ix. p. 224 (1875) [Philippines]; *Sharpe, Ibis*, 1878, p. 419 [Sarawak, Banjermassing]; *id. P. Z. S.* 1879, p. 350 [Labuan]; *Nichols. Ibis*, 1881, p. 155 [Java], 1883, p. 255 [Sumatra]; *Kutter, J. f. O.* 1883, pp. 293, 316 [Philippine Is.]; *Wardlaw-Ramsay, Ibis*, 1884, p. 331 [Manilla]; *Grabows. Ornis*, 1885, p. 161 [S.E. Borneo]; *Kutter, J. f. O.* 1885, p. 353 [Borneo]; *Guillem. P. Z. S.* 1885, pp. 272 [Sulu Is.], 416 [Silam]; *Wardlaw-Ramsay, Ibis*, 1886, p. 160 [Manilla]; *Everett, P. Z. S.* 1889, p. 225 [Palawan]; *Whitehead, Ibis*, 1890, p. 57 [Palawan]; *Sharpe, Ibis*, 1890, pp. 140, 284 [Labuan, Kina Balu].
Excalfactoria australis, *Gould, Handb. B. Austr.* ii. p. 197 (1865); *Ramsay, Ibis*, 1868, p. 279 [Sydney]; *id. P. Z. S.* 1876, p. 119 [N.E. Queensland]; *id. Tab. List Aust. B.* p. 19 (1888); *North, N. & E. B. Austr.* p. 291 (1889).
Coturnix (Excalfactoria) australis, *Gray, List Gallinæ Brit. Mus.* p. 63 (1867); *id. Hand-l. B.* ii. p. 269 (1870).
Coturnix sinensis, *Swinh. Ibis*, 1869, p. 348 [Formosa].

Synoicus (Excalfactoria) sinensis, *Ramsay, P. Linn. Soc. N. S. W.* i. p. 186 (1876).

Adult male. Upper parts much darker than in the male of *E. chinensis*, and more strongly blotched with black; plumage otherwise similar.

Adult female. Upper parts with much more black than in the female of *E. chinensis*. Underparts darker and much more strongly barred with black.

Hab. Philippines, Palawan, Sulu Islands, Borneo, Java, Sumatra, Australia.

a–c. ♂ imm. et juv. sk.	Manilla (*Maitland Heriot*).	Tweeddale Coll.
d. ♀ ad. sk.	Taguso, Palawan, June.	J. Whitehead, Esq. [P.].
e–g. ♂ ♀ ad. et imm. sk.	Labuan.	Ussher and Everett Colls.
h. ♂ ad. sk.	Sarawak, Borneo.	Rajah Brooke [P.].
i–m. ♂ ♀ ad. sk.	Busau, Sarawak.	Everett Coll.
n–p. ♂ ♀ ad. sk.	Sumatra.	A. R. Wallace, Esq. [C.].
q, r. ♀ ad. sk.	Gilolo.	Tweeddale and Wallace Colls.
s. ♂ ad. sk.	Australia.	Gould Coll.
t. ♂ ad. sk.	Australia.	Sir E. Belcher [P.].
u–x. ♂ ♀ ad. sk.	Somerset, Cape York (*Cockerell & Thorpe*).	Salvin-Godman and Tweeddale Colls.
y–a′. ♀ ad. et juv. sk.	Queensland.	Salvin-Godman and Tweeddale Colls.
b′. ♀ ad. sk.	Moreton Bay.	Gould Coll.
c′, d′. ♂ ♀ ad. sk.	[N. S. Wales.]	Gould Coll.
e′–h′. ♂ ♀ ad. et imm. sk.	S. Australia.	Sir G. Grey [P.]

2. Excalfactoria lepida.

Excalfactoria sinensis, *Ramsay* (*nec Linn.*), *P. Linn. Soc. N. S. W.* i. p. 371 (1876) [New Ireland].

Excalfactoria lepida, *Hartl. Sitz. Ver. Hamb.* vii. p. (1879) [Mioko, Duke of York Is.]; *Salvin & Scl. Ibis*, 1880, p. 135; *Reich. & Schal. J. f. O.* 1880, p. 101; *Salvad. Atti R. Acc. Sc. Tor.* xvi. p. 625 (1881); *id. Ann. Mus. Civ. Gen.* xviii. p. 9 (1882); *id. Orn. Pap.* iii. p. 256 (1882); *id. Agg.* pt. iii. p. 195 (1891); *Finsch, Vög. d. Südsee*, p. 20 (1884) [New Britain]; *Tristr. Cat. Coll. B.* p. 34 (1889).

Excalfactoria chinensis, *Scl. P. Z. S.* 1879, p. 447 [Duke of York Group].

? Synœcus australis, *Layard, Ibis*, 1880, p. 302 [Blanche Bay, New Britain].

Coturnix sinensis, *Finsch, Ibis*, 1881, p. 539.

Adult male. The upper parts are darker than those of the true *E. chinensis*, and similar to those of the subspecies *E. lineata*. There is no trace of chestnut on the upper wing-coverts and all the underparts are slate-blue, except the lower part of the belly, thighs, vent,

and under tail-coverts. Total length 4·8 inches, wing 2·7, tail ·9, tarsus ·7.

Hab. New Britain, New Ireland, Duke of York Group.

a. ♂ ad. sk.	New Britain (*Lieut. Richards*).	Tweeddale Coll.
b. ♂ imm. sk.	New Britain, June (*Kleinschmidt*).	Godeffroy Mus.

3. Excalfactoria adansoni.[1]

Coturnix adansonii, *Verr. Rev. et Mag. de Zool.* 1851, p. 515 [Gaboon]; *Hartl. Syst. Orn. W.-Afr.* p. 204 (1857); *Reich. J. f. O.* 1874, p. 383, 1875, p. 48 [Gold Coast, Cameroons]; *Sharpe's ed. Layard's B. S. Afr.* p. 606 (1884) [Kingwilliamstown]; *Reich. J. f. O.* 1890, p. 109 [Cameroons].

Excalfactoria adansonii, *Bonap. C. R.* xlii. p. 881 (1856); *Grant, Ann. Mag. N. H.* (6) ix. p. 167 (1892).

Coturnix (Excalfactoria) adansonii, *Gray, List Gallinæ Brit. Mus.* p. 63 (1867); *id. Hand-l. B.* ii. p. 269 (1870).

Coturnix emini, *Reich. Allg. deutsch. orn. Ges. Berlin*, Bericht x. (7th Dec., 1891) p. 3; *id. J. f. O.* 1892, p. 18, pl. 1. fig. 3 (♂) [Bukoba, Victoria Nyanza].

Adult male. Differs from the male of *E. chinensis* in having the whole of the upper parts blackish brown washed with slate, except the wing-coverts, scapulars, upper tail-coverts, sides, and flanks, which are bright chestnut, especially the outer wing-coverts, with a slate-grey shaft-stripe down each feather; the middle of the back blotched with black. (In very old specimens these marks disappear.) The white patch on the fore part of the neck larger and extending further down on the chest; and the rest of the underparts very dark slate-grey. Total length 5·2 inches, wing 2·9–3, tail 1·1, tarsus ·8.

Adult female. Very similar to the female of the subspecies *E. lineata*, but the wing-coverts and scapulars are more distinctly barred with black. The average wing-measurement is 3·1–3·2.

Hab. Africa, south of about 5° north latitude.

a–g. ♂ ♀ ad. et imm. sk.	Accra, July (*J. Smith*).	Shelley Coll.
h–l. ♂ ♀ ad. et imm. sk.	Gaboon.	Shelley Coll.
m. ♀ ad. sk.	Natal (*Gordge*).[2]	Shelley Coll.
n, o. ♂ ad. sk.	Pinetown, March (*T. L. Ayres*).	Sharpe Coll.

21. PTILOPACHYS.

	Type.
Ptilopachus, *Swains. Class. B.* ii. p. 344 (1837)	P. fuscus.
Petrogallus, *J. E. Gray, MS., fide Jard. & Selb. Ill. Orn.* (n. s.) text to pl. xvi. (1837)	P. fuscus.
Ptilophachys, *Strickl. Ann. Mag. N. H.* vii. p. 37 (1841)	P. fuscus.

Sexes similar.

Tail composed of 14 feathers, rather long and rounded, and more than $\frac{2}{3}$ the length of the wing.

Tarsus shorter than the middle toe and claw, and not armed with a spur.

Claws short and rounded.

A naked space round the eye.

Range. Africa: from Senegambia and the Gold Coast to Kordofan, Abyssinia, and the Sük Country.

1. Ptilopachys fuscus.

Rufous-breasted Partridge, *Lath. Gen. Hist.* viii. p. 296 (1823).
Buff-breasted Partridge, *Lath. Gen. Hist.* viii. p. 296 (1823).
Calid Quail, *Lath. Gen. Hist.* viii. p. 317 (1823).
Perdix fusca, *Vieill. Tabl. Encycl. Méth.* i. p. 366 (1823); *id. Gal. des Ois.* ii. p. 40, pl. ccxii. (1825); *Jard. & Selb. Ill. Orn.* (new series) pl. xvi. (1837).
Perdix ventralis, *Valenc. Dict. Sci. Nat.* xxxviii. p. 435 (1825) [Senegal]; *Rüpp. N. Wirbelt., Vög.* p. 11 (1835).
Petrogallus fuscus, *J. E. Gray, MS., in Jard. & Selb. Ill. Orn.* (new series) text to pl. xvi. (1837).
Ptilopachus erythrorhynchus, *Swains. B. of W. Afr.* ii. p. 220 (1837); *id. Class. B.* ii. p. 344 (1837).
Ptilopachus fuscus, *Gray, List of B.* pt. iii. *Gall.* p. 31 (1844); *id. Gen. B.* iii. p. 505 (1846); *Hartl. Syst. Orn. W.-Afr.* p. 203 (1857); *id. J. f. O.* 1861, p. 267 [Bissao].
Ptilopachus ventralis, *Rüpp. Vög. N.O.-Afr.* p. 105 (1845) [Kordofan and West Abyssinia]; *Gray, Gen. B.* iii. p. 504 (1846); *id. List Gallinæ Brit. Mus.* p. 45 (1867); *id. Hand-l. B.* ii. p. 263 (1870); *Shelley & Buckley, Ibis,* 1872, p. 292 [Accra].
Ptilopachys ventralis, *Heugl. Orn. N.O.-Afr.* iii. p. 879 (1873); *Sharpe, Ibis,* 1892, p. 553 [Ngobota, Sük Country].

Adult male and female. Top of the head brown, shading into sienna on chest and mantle, each feather with a dark band down the shaft; those of the head are also margined with brownish white, while those of the other parts have a submarginal band of whitish, and are irregularly barred with brown towards the margins. Rest of the back, rump, and upper tail-coverts dull brown, finely vermiculated with whitish. Scapulars and lesser and median wing-coverts the same, but more coarsely marked with white and intermixed with sienna towards the middle. Primaries and secondaries and their coverts brown, finely mottled on the outer and slightly on the inner web with rufous. Superciliary stripes, cheeks, chin, throat, and neck dark brown, margined with whitish. Middle of the breast uniform buff; sides of the breast, sides and flanks chestnut, irregularly and transversely barred towards the margins of the webs with dark brown and white. Thighs dark brown, irregularly barred with white; belly and under tail-coverts dark brown, the latter fringed with dirty white. Tail dark brown, faintly mottled, especially on the inner feathers, with rufous buff.

Male. Total length 11 inches, wing 5·2, tail 3·6, tarsus 1·2.

Female. Total length 9·5 inches, wing 4·7, tail 3·1, tarsus 1·1.

Hab. Same as that of the genus.

a, b. Ad. et imm. sk.	West Africa.	Purchased.
c. Ad. sk.	Senegal.	Riocour Coll. (Type of the species.)
d. Ad. sk.	Gambia.	
e–k. Ad. sk.	Accra, Feb., March (*G. E. S. & T. E. Buckley*).	Shelley Coll.
l. Ad. sk.	Niger (*Baikie*).	Shelley Coll.
m–o. Ad. sk.	Abyssinia (*Esler*).	Shelley Coll.

22. BAMBUSICOLA.

Type.
Bambusicola, *Gould, P. Z. S.* 1862, p. 285 ..... B. thoracica.

Sexes similar.

Tail composed of 14 feathers, rather long and wedge-shaped, more than three-fourths of the length of the wing, the outer pair of feathers being about two-thirds of the length of the middle pair.

1st primary much shorter than the 10th, which is equal to or rather shorter than the 2nd. 5th is slightly longest.

Males (and sometimes females) with a pair of spurs.

Claws like those of *Francolinus*.

Range. Indo-Chinese countries and Formosa.

Key to the Species.

A. Superciliary stripe buff; primary-quills mostly chestnut ..... *fytchii*, p. 257.
B. Superciliary stripe grey; primary-quills dark blackish brown.
a. Cheeks and ear-coverts rufous chestnut ..... *thoracica*, p. 258.
b. Cheeks and ear-coverts dark grey ..... *sonorivox*, p. 259.

1. Bambusicola fytchii.

Bambusicola fytchii, *Anders. P. Z. S.* 1871, p. 214, pl. xi. [Ponsee, Yunnan]; *Swinh. P. Z. S.* 1871, p. 400; *Godwin-Austen, P. Z. S.* 1874, p. 44; *Blyth & Walden, Cat. Mamm. & B. Burma*, p. 151 (1875); *David & Oustal. Ois. Chine*, p. 394 (1877) [S.W. Sze-chuen]; *Hume, Str. F.* v. p. 493 (1877); *Anderson, Yunnan*, ii. *Birds*, p. 673, pl. liv. (1878); *Hume & Marsh. Game B.* ii. p. 97, pl. (1879); *Fytche, Burma*, ii. pl. iv. (1879); *Hume, Str. F.* viii. p. 111 (1879); *id. Str. F.* xi. p. 308 (1888) [E. Manipur]; *Grant, Ibis*, 1892, p. 389.

Bambusicola hopkinsoni, *Godwin-Austen, P. Z. S.* 1874, p. 44; *id. J. As. Soc. Beng.* xliii. pt. ii. p. 172 (1874) [Khasia Hills]; *Hume, Str. F.* iii. p. 399 (1875).

Adult male and female. Top of the head reddish brown, ochraceous on the lores; nape dark sienna, each feather with a wide chestnut stripe down the middle; upper back olivaceous brown, each feather with a wide dark chestnut band down the centre, and often vermiculated or dotted with white on the margin. Scapulars and lesser and median wing-coverts pale brown, with irregular bars of buff and fine vermiculations of black, a large subterminal dark chestnut and black patch and a whitish-buff margin. Lower back,

rump, and upper tail-coverts pale olive-brown, finely vermiculated with lighter colour and black, some of the longer upper tail-coverts being also spotted along the shaft with black. Primaries and secondaries and their coverts light chestnut, darker towards the extremities of both webs; the secondaries and their coverts narrowly margined and irregularly barred with buff. Ear-coverts chestnut (in some male specimens black), superciliary stripe, sides of face, chin, and throat buff or pale rust-coloured. Feathers of the chest olive-brown, with a chestnut shaft-patch at the extremity, and a white blotch on either margin. Breast and rest of underparts pale buff; sides, flanks, and under tail-coverts with large black subterminal heart-shaped spots. Tail-feathers reddish brown, the middle pairs irregularly barred and mottled with buff. Male provided with a pair of spurs, female generally without. Upper mandible deep brown, lower brown; iris orange-hazel. Legs and feet grey, pale brownish grey, or dark.

Male. Total length 12·3 inches, wing 5·8, tail 4·4, tarsus 1·9.

Female. Total length 11·5 inches, wing 5·6, tail 4·2, tarsus 1·7.

Immature specimens differ in having buff shaft-stripes on the feathers of the back of the neck, back, wing-coverts, and scapulars, and the rump and upper tail-coverts with larger subterminal black spots, often running some distance up the shaft.

Hab. N.E. India. Garo, Khasia, and Naga Hills, also the hills of N. Cachar, E. Manipur, and Kachin to S.W. Sze-chuen.

a–g. ♂ ♀ ad., imm., et pull. sk.	Shillong, Aug., Oct., Nov., Dec. (*J. Cockburn*).	Hume Coll.
h. ♂ ad. sk.	Naga Hills, Jan. (*A. W. Chennell*).	Tweeddale Coll.
i, k. ♂ ♀ ad. sk.	Manipur, April, May (*A. O. H.*).	Hume Coll.
l. ♀ ad. sk.	Ponsee, Kachin Hills, April.	Dr. J. Anderson [P.].
m. Pull. st. [3 days old].		Zool. Soc. Coll.

2. Bambusicola thoracica.

Perdix thoracica, *Temm. Pig. et Gall.* iii. pp. 335, 723 (1815); *Blyth, Cat. B. Mus. As. Soc.* p. 507 (1849); *Gray, List Gallinæ Brit. Mus.* p. 58 (1867); *id. Hand-l. B.* ii. p. 267, no. 9699 (1870); *id. Fasc. B. China*, p. 6 (1871); *David, N. Arch. Mus. Bull.* vii. p. 11 (1871) [Sze-chuen].

Perdix sphenura, *Gray, Zool. Misc.* p. 2 (1844); *id. Fasc. B. China*, pl. viii. (1871).

Arborophila sphenura, *Gray, List Gall. B.* iii. p. 38 (1844).

Francolinus thoracicus, *Gray, Gen. B.* iii. p. 505 (1846).

Francolinus sphenurus, *Gray, Gen. B.* iii. p. 506 (1846).

Starna thoracica, *Bonap. C. R.* xlii. p. 883 (1856).

Galloperdix sphenura, *Bonap. C. R.* xlii. p. 882 (1856).

Bambusicola sphenura, *Gould, P. Z. S.* 1862, p. 285.

Arboricola bambusæ, *Swinh. Ibis*, 1862, p. 259 [Hills of Foochow].

Bambusicola thoracica, *Swinh. P. Z. S.* 1863, p. 307; *id. Ibis*, 1863, pp. 400, 401 [Foochow]; *id. P. Z. S.* 1871, p. 400; *David & Oust. Ois. Chine*, p. 393 (1877) [S. China, Fokien to Sze-chuen and S. Shen-si]; *Styan, Ibis*, 1891, p. 329 [Lower Yangtse basin]; *Grant, Ibis*, 1892, p. 389; *De la Touche, Ibis*, 1892, p. 494 [Foochow and Swatow Hills].

Adult male and female. Top of the head umber-brown, usually some of the feathers with subterminal rufous spots; forehead and lores grey; back of neck brownish grey, shading into pale olive-brown on the rest of the upper parts; most of the feathers of the upper back with a wide, triangular, terminal, chestnut shaft-patch. Wing-coverts, scapulars, and outer secondaries irregularly barred, vermiculated, and spotted with buff, the scapulars with large subterminal dark or very dark chestnut blotches, margined with black and buff; some of the upper scapulars are also spotted with white. Lower back, rump, and upper tail-coverts with faint, wavy, transverse bars of dusky. Quills and their greater coverts blackish grey; the outer webs of the primaries, inner secondaries, and their coverts irregularly margined and mottled with buff. A pale grey superciliary band passing down the side of the neck and dividing the brownish nape from the sides and front of the neck, which with the sides of the face, chin, and throat are bright rufous chestnut. Chest grey, with fine transverse lines of black, and edged below with rufous chestnut. Rest of the underparts bright or pale buff; most of the feathers of the sides and flanks with a large or moderate subterminal transverse spot or bar of dark chestnut and black or black. Tail dull chestnut; both webs of the middle feathers and the outer webs of the outer feathers irregularly barred and mottled with buff. Bill blackish grey, with broad pale tip; iris rich brown; eyelid brown; legs and claws light greenish grey.

Male. Total length 11·8 inches, wing 5·4, tail 3·8, tarsus 1·7.

Female. Total length 10·8 inches, wing 5·2, tail 3·5, tarsus 1·6.

In younger specimens the chin and throat are mixed with buff feathers, and the lower back, rump, and upper tail-coverts are spotted with dark chestnut and black.

Hab. S. China; Fokien to Sze-chuen and S. Shen-si.

a–c. ♂ ad. et imm. sk.	China.	J. R. Reeves, Esq. [P.].
d. ♀ ad. st.	China.	J. R. Reeves, Esq. [P.].
e. ♂ ad. sk.	China.	Gould Coll.
f. ♀ ad. sk.	Foochow, May (*R. Swinhoe*).	Tweeddale Coll.
g. ♂ ad. sk.	Shanghai, Jan.	F. W. Styan, Esq. [P.].
h. ♂ ad. skel.	China.	Zool. Soc. Coll.

3. Bambusicola sonorivox.

Bambusicola sonorivox, *Gould*, *P. Z. S.* 1862, p. 285 [Formosa]; *Swinhoe*, *Ibis*, 1863, pp. 208, 399; *Gould*, *B. Asia*, vi. pl. 63 (1864); *Swinhoe*, *Ibis*, 1865, p. 542, 1866, pp. 134, 404, 405, 406; *Grant*, *Ibis*, 1892, p. 389.

Perdix sonorivox, *Gray*, *List Gallinæ Brit. Mus.* p. 58 (1867); *id. Hand-l. B.* ii. p. 267, no. 9700 (1870); *Swinhoe*, *P. Z. S.* 1871, p. 400.

Adult male and female. General plumage resembles that of *B. thoracica*, but is altogether richer and darker, and may be at once

distinguished by having only the chin and throat chestnut, the sides of the face darkish grey like the supereiliary stripes and sides of the neck, instead of bright rufous chestnut, and the general colour of the breast and belly ochraceous buff, each feather with a subterminal transverse spot or bar of bright chestnut usually margined with blackish. Bill leaden black, brownish white at the tip of the upper mandible; legs and feet dark brownish olive-green.

Male. Total length 10 inches, wing 5·3, tail 3·8, tarsus 1·6.

Female. Total length 9·6 inches, wing 5·1, tail 3·5, tarsus 1·5.

Hab. Island of Formosa.

a, b. ♂ ♀ ad. sk.	North Formosa, March (*R. Swinhoe*).	Tweeddale Coll.
c. ♀ ad. sk.	North Formosa (*R. Swinhoe*).	Hume Coll.
d, e. ♂ ad. st.	Formosa.	R. Swinhoe, Esq. [C.].

23. GALLOPERDIX.

	Type.
Galloperdix, *Blyth, J. As. Soc. Beng.* xiii. pt. 2, p. 936 (1844)	G. lunulata.
Hepburnia, *Reichenb. Nat. Syst. Vög.* p. xxviii (1852) ..	G. lunulata.
Plectroperdix, *Heine, Nomencl. Mus. Hein.* p. 293 (1890).	G. lunulata.

Sexes different.

Tail composed of 14 feathers, fairly long, rounded, the outer feathers more than an inch shorter than the middle pair.

1st primary is much shorter than the 2nd, which is equal to or shorter than the 10th; 5th and 6th slightly the longest.

Tarsi rather longer than the middle toe and claw, and armed in the male with two and sometimes with three pairs of spurs. In the female one pair of spurs is developed, rarely two, though one or other of the tarsi may be armed with two spurs.

Axillaries short.

A large naked space before and around the eye.

Range. India and Ceylon.

Key to the Species.

I. With two or three pairs of spurs. (*Males.*)
- A. Top of the head brown, without white markings; mantle chestnut, edged with pale sandy brown; breast chestnut, with or without grey spots ..... *spadicea*, p. 261.
- B. Top of the head black, with white shaft-stripes or spots.
  - *a.* Mantle chestnut, each feather with a subterminal white ocellus surrounded by a black ring; breast buff, spotted with black. *lunulata*, p. 263.
  - *b.* Mantle black, with white shaft-stripes; breast white, more or less edged with black .... *bicalcarata*, p. 264.

II. With or without a pair of spurs, sometimes with three spurs (two on one leg and one on the other), rarely with two pairs. (*Females.*)
C. Upper parts more or less strongly marked with black; breast chestnut, with black tips to the feathers ..... *spadicea*, p. 261.
D. Upper parts uniform or very finely vermiculated with black.
c. Back dull olive-brown; chest ochraceous .. *lunulata*, p. 263.
d. Back and breast chestnut, finely vermiculated with black ..... *bicalcarata*, p. 264.

1. Galloperdix spadicea.

La Perdix rouge de Madagascar, *Sonnerat, Voy. Ind. Orient.* ii. p. 169 (1782).
Brown African Partridge, *Lath. Gen. Syn.* ii. pt. ii. p. 759 (1783).
Tetrao spadiceus, *Gmel. S. N.* i. pt. ii. p. 759 (1788).
Perdix spadicea, *Bonnat. Tabl. Encycl. Méth.* i. p. 208 (1791); *Temm. Pig. et Gall.* iii. pp. 315, 719 (1815); *Less. Traité d'Orn.* p. 504 (1831).
Perdix spadiceus, *Gray, in Griff. ed. Cuv.* iii. p. 47 (1829).
Francolinus spadiceus, *Gray, Ill. Ind. Orn.* ii. pl. 42. fig. 2 (1834); *Less. in Bélang. Voy. Ind. Orient.* p. 272 (1834); *Jerd. Madr. Journ.* xii. p. 5 (1840).
Polyplectron northiæ, *Gray, Ill. Ind. Orn.* ii. pl. 43. fig. 1 (1834).
Ithaginis northiæ, *Gray, List of B.* pt. iii. *Gall.* p. 32 (1844).
Ithaginis madagascariensis, *Gray* (*nec* Tetrao madagarensis, *Scop.*), *List of B.* pt. iii. *Gall.* p. 32 (1844); *id. Gen. B.* iii. p. 504 (1846).
Galloperdix spadiceus, *Blyth, Cat. Mus. As. Soc.* p. 241 (1849); *Gould, B. As.* vi. pl. 68 (1854); *Jerd. B. Ind.* iii. p. 541 (1863); *Hume, N. & E. Ind. B.* p. 532 (1873); *Butler, Str. F.* iv. p. 5 (1876) [Aboo and N. Guzerat]; *Fairb. Str. F.* iv. pp. 251, 262 (1876) [Khandala, Mahableshwar, and Ghât range], v. p. 409 (1877) [Palani Hills]; *Ball, Str. F.* v. p. 418 (1877) [between Mahanidi and Godavari Rivers]; *Marsh. B. Nest. Ind.* p. 59 (1877); *Hume & Marsh. Game B. Ind.* i. p. 247, pl. (1878); *Davids. & Wenden, Str. F.* vii. p. 87 (1878) [Deccan]; *Ball, Str. F.* vii. p. 225 (1878) [Ganges to Godaveri]; *Butler, Cat. B. Sind*, p. 54 (1879) [Aboo]; *Vidal, Str. F.* ix. p. 76 (1880) [S. Konkan]; *Butler, Str. F.* ix. p. 422 (1880) [Deccan and S. Mahratta country]; *Davids. Str. F.* x. p. 316 (1882) [W. Khandeish]; *Davison, Str. F.* x. p. 410 (1883) [Nilghiris, Wynaad, and Mysore]; *Swinh. & Barnes, Ibis*, 1885, p. 131 [Central India]; *Taylor, Str. F.* x. p. 464 [Manzeerabad, Mysore], p. 531 (1887) [Orissa]; *Terry, Str. F.* x. p. 479 (1887) [Palani Hills]; *Oates, ed. Hume's Nests & Eggs*, iii. p. 423 (1890).
Hepburnia spadicea, *Hartl. Orn. Beitr. Madag.* p. 68 (1861) [Madagascar].
Ithaginis spadiceus, *Gray, List Gallinæ Brit. Mus.* p. 47 (1867); *id. Hand-l. B.* ii. p. 264 (1870).
Galloperdix spadicea, *Blyth, Ibis*, 1867, p. 157 [Oudh, Gorakhpur]; *Elwes, Ibis*, 1870, p. 528 [Cardamum Hills]; *Mairet, Bull. Soc. Acclim.* 1889, p. 300.
Hepburnia spadiceus, *Ball, Str. F.* ii. p. 426 (1874) [Chota Nagpur], iii. p. 294 (1875).

Adult male *. Lores and forehead sandy buff, shading into dark brown on the top and back of the head; nape paler brown; rest of the upper parts rufous chestnut; most of the feathers, especially those of the mantle, margined with pale greyish brown; and the wing-coverts, lower back, rump, and upper tail-coverts finely vermiculated with black. Quills brown, except the outer webs of the secondaries, which resemble the coverts; rest of the head and neck pale greyish brown, shading into whitish on the chin and throat; underparts chestnut or rufous chestnut, each feather margined with pale sandy brown or buff. Many specimens have a larger or smaller patch of feathers in the middle of the breast, ornamented with ash-grey centres; these markings have apparently no reference to age, locality, or season. Under tail-coverts chestnut, vermiculated with black. Tail blackish brown, the centre pair of feathers and the outer webs of the second and third pairs mottled with rufous; legs and feet coral-red; bill dusky red at the base, horny towards the tip. Total length 14·6 inches, wing 6·3, tail 5·4, tarsus 1·7.

An *immature male* has the plumage of the adult, but the upper parts and breast are intermixed with feathers resembling those of the female, and the spurs on the tarsi are wart-like or absent.

Adult female differs from the male in having all the upper parts, especially the mantle and wing-coverts, mottled and irregularly barred with black, most strongly marked in specimens from Southern India. The feathers of the neck and underparts tipped with black, and all the tail-feathers mottled with rufous or buff. Tarsi sometimes without spurs, usually with a pair and often two.

Hab. Peninsula of India; Madagascar, introduced.

a–g. ♂ ♀ ad. sk.	Mount Aboo, May, July (*G. King*).	Hume Coll.
h, i. ♂ ♀ ad. sk.	Deccan (*Col. Sykes*).	India Museum [P.].
k, l. ♂ ♀ ad. sk.	Matheran, Feb.	Col. Lloyd [P.].
m–o. ♂ ♀ ad. et ♂ imm. sk.	Mahableshwar, April, May (*H. J. Bruce*).	Hume Coll.
p. ♂ ad. sk.	Mahableshwar, May (*S. B. Fairbank*).	Tweeddale Coll.
q. ♂ ad. sk.	S. Konkan, Feb. (*G. Vidal*).	Hume Coll.
r. ♀ ad. sk.	Belgaum, Feb. (*E. A. Butler*).	Hume Coll.
s. ♀ ad. sk.	Goa Frontier, April (*S. B. Fairbank*).	Tweeddale Coll.
t–v. ♂ ad., ♀ imm. sk.	Malabar Coast.	Tweeddale Coll.
w, x. ♂ ♀ imm. sk.	Calicut.	Hume Coll.

* Specimens from Mount Aboo are undoubtedly somewhat paler than those from the Nilghiris. The males have the breasts and underparts generally paler chestnut, and the females have the black markings paler and less distinct, especially on the upper parts of the body. There cannot, however, be the slightest ground for supposing that there are even two distinct races, much less, species, as this variation in tint is fully accounted for by the difference in climate, the annual rainfall on Mount Aboo being slight compared with that of Calicut and the Malabar coasts, whence the most richly coloured birds in our series were obtained.

y. ♀ juv. sk.	Coorg, Bramagherry Hills, April (*W. Davison*).	Hume Coll.
z–*i'*. ♂ ♀ ad. sk.	Ootacamund, Jan. to April (*W. Davison*).	Hume Coll.
k'–*m'*. ♂ ♀ ad. sk.	Kotagherry, March (*W. Davison*).	Hume Coll.
n'–*t'*. ♂ ♀ ad. et ♂ imm. sk.	Coonoor, Jan. (*W. Davison*).	Hume Coll.
u', *v'*. ♂ ad. et imm. sk.	Mysore, July.	W. Davison, Esq. [P.].
w'. ♂ ad. sk.	Mysore, May (*W. Davison*).	Hume Coll.
x'. ♀ ad. sk.	Seegore, Feb. (*W. Davison*).	Hume Coll.
y', *z'*. ♂ ad. sk.	Shevaroy Hills, Feb. (*A. G. R. Theobald*).	Hume Coll.
a''–*c''*. ♂ ♀ ad. sk.	Madras, April (*W. Davison*).	Hume Coll.
d''–*g''*. ♂ ♀ ad. sk.	Seoni Forests, Feb. and May (*R. Thompson*).	Hume Coll.
h''. ♂ ad. sk.	Oudh.	Hume Coll.

2. Galloperdix lunulata.

Curria Partridge, *Lath. Gen. Hist.* viii. p. 270 (1823).

Perdix lunulata, *Valenc. Dict. Sci. Nat.* xxxviii. p. 446 (1825); *Gray, in Griff. ed. Cuv.* iii. p. 48 (1829); *Less. Traité d'Orn.* p. 504 (1831).

Perdix hardwickii, *Gray, in Griff. ed. Cuv.* iii. p. 48 (1829); *id. Ill. Ind. Zool.* i. pl. 52 (1830–32).

Francolinus nivosus, *Delessert, Mag. de Zool. Ois.* pl. 18 [text] (1840); *id. Rev. Zool.* 1840, p. 100.

Francolinus hardwickii, *Delessert, Voy. dans l'Inde*, p. 26, pl. 10 (1843).

Ithaginis lunulatus, *Gray, List of B.* pt. iii. *Gall.* p. 32 (1844); *id. Gen. B.* iii. p. 504 (1846); *id. List Gallinæ Brit. Mus.* p. 47 (1867); *id. Hand-l. B.* ii. p. 264 (1870).

Galloperdix lunulosa, *Blyth, Cat. Mus. As. Soc.* p. 241 (1849); *Gould, B. As.* vi. pl. 69 (1854); *Selat. & Wolf, Zool. Sket.* 2, pl. 41 (1861); *Beavan, Ibis*, 1868, p. 382 [Maunbhoom].

Galloperdix lunulosus, *Jerd. B. Ind.* iii. p. 543 (1863); *Marsh. B. Nest. Ind.* p. 59 (1877); *Hume & Marsh. Game B. Ind.* i. pl. (1878).

Galloperdix lunulatus, *Hume, N. & E. Ind. B.* p. 533 (1873); *Ball, Str. F.* ii. p. 427 (1874) [Chota Nagpur], v. p. 418 (1877) [Mahanadi and Godaveri rivers], vii. p. 225 (1878) [Ganges to Godaveri]; *Hume & Marsh. Game B. Ind.* i. p. 255, pl. (1878); *Markham, Str. F.* ix. p. 206 (1880) [Allahabad]; *Butler, Str. F.* ix. p. 422 (1880) [Belgaum Dist.]; *Davison, Str. F.* x. p. 410 (1883) [Nilghiris]; *Taylor, Str. F.* x. p. 531 (1887) [Orissa]; *Oates, ed. Hume's Nests & Eggs*, iii. p. 425 (1890).

Adult male. Top of the head black, more or less glossed with dull purplish green, each feather with a white shaft usually ending in a subterminal white spot; mantle, back, and rump chestnut, the feathers, especially of the former, with white black-edged ocelli at the extremity, but in some examples these markings are nearly or entirely absent on the lower back and rump; wing-coverts and scapulars resemble the feathers of the mantle, but are more or less mixed with dark brown, glossed with dull purplish green. Quills dark brown. Lores, sides and underparts of the head and neck white, spotted and barred with black; chin white. Chest, breast, and

middle of belly buff, each feather with a black terminal spot, much reduced in old examples; sides and flanks like the back; under tail-coverts the same, but more mixed with black. Upper tail-coverts and tail black, slightly glossed with purplish green. Legs and feet grey; bill blackish horn; lower mandible paler. Total length 13·6 inches, wing 6·2, tail 4·8, tarsus 1·5.

Immature males differ from the above in having the greater part of the wing-coverts and scapulars brownish black, glossed with purplish green, and the chest and breast much more heavily spotted with black.

Adult female. Top of the head black, with chestnut shaft-stripes; neck and upper parts of the body dull olive-brown, most of the feathers narrowly margined with dusky; lores, superciliary stripes, and cheeks mostly dark chestnut; chin and throat chestnut or chestnut mixed with buff, with a rather clearly marked buff band on each side; chest and breast ochraceous brown, shading into dull olive-brown on the lower parts, most of the feathers with a small blackish terminal spot or margin. Quills and tail as in the adult male. Total length 12·6 inches, wing 5·9, tail 4·4, tarsus 1·4.

Immature females have the plumage of the upper parts finely mottled and irregularly barred with chestnut and black; the outer secondaries and tail-feathers are more distinctly barred.

In still younger examples the breast and mantle are spotted with buff.

Hab. Peninsula of India.

a, *b*. ♀ ad. et imm. sk.	India.	India Museum [P.].
c, *d*. ♂ ♀ ad sk.	N.W India.	Capt. S. Pinwill [P.].
e. ♂ ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
f. ♀ ad. sk.	Parisnath Hills.	Hume Coll.
g. ♂ ad. sk.	Jubbulpur Dist.	Tweeddale Coll.
h–*r*. ♂ ♀ ad. sk.	Raipur, Jan.	Hume Coll.
s–*w'*. ♂ ♀ ad., imm., juv. et pull. sk.	Raipur.	Hume Coll.
v'–*y'*. ♂ ♀ ad. et pull. sk.	Seoni.	Hume Coll.
z'. ♂ ad. sk.	Madras.	Hume Coll.
a''. ♂ imm. sk.	Metupallium, Sept. (*R. G. W. R.*).	Tweeddale Coll.
b''. ♂ ad. sk.	Coonoor, Nov.	W. Davison, Esq. [P.].

3. Galloperdix bicalcarata.

Perdix bicalcaratus, *Penn. Ind. Zool.* p. 40, pl. vii. (1769).
Perdix zeylonensis, *Gm. S. N.* i. pt. ii. p. 759 (1788); *Bonnat. Encycl. Méth.* i. p. 210, pl. 93. fig. 3 (1791).
Perdix ceylonensis, *Lath. Ind. Orn.* ii. p. 644 (1790); *Temm. Pig. et Gall.* iii. pp. 311, 718 (1815).
Ceylon Partridge, *Lath. Gen. Syn. Suppl.* ii. p. 278 (1802); *id. Gen. Hist.* viii. p. 268 (1823).

Francolinus ceylanensis, *Less. Traité d'Orn.* p. 504 (1831).
Galloperdix zeylonensis, *Blyth, Cat. Mus. As. Soc.* p. 241 (1849); *Gould, B. As.* vi. pl. 67 (1854); *Hume, N. & E. Ind. B.* p. 535 (1873).
Galloperdix bicalcarata, *Layard, Ann. Mag. N. H.* (2) xiv. p. 105 (1854); *Blyth, Ibis*, 1867, p. 308; *Holdsw. P. Z. S.* 1872, p. 469; *Legge, Ibis*, 1874, p. 26, 1875, p. 400; *id. B. Ceyl.* iii. p. 741, pl. (1880).
Ithaginis zeylonensis, *Gray, List Gallinæ Brit. Mus.* p. 46 (1867); *id. Hand-l. B.* ii. p. 264 (1870).
Galloperdix bicalcaratus, *Hume, Str. F.* vii. pp. 430, 453 (1878); *Hume & Marsh. Game B. Ind.* i. p. 261, pl. (1878); *Oates, ed. Hume's Nests & Eggs*, iii. p. 426 (1890).

Adult male. Top of the head, back and sides of the neck, mantle, sides, and flanks black, each feather, especially of the three last, with a wide white shaft-stripe; lower back and rump dark chestnut finely mottled with black; wing-coverts and scapulars the same, but with the terminal part black with a shaft-stripe or subterminal spot of white. Primaries and secondaries dark brown, the latter mottled with chestnut on the outer web. Feathers of the sides of the head white edged with black, of the chin and throat white, of the chest black with a large white subterminal patch, and of the middle of the breast and belly mostly white, more or less widely edged with black according to age; rest of the underparts blackish, mixed with whitish grey or rufous. Tail and upper tail-coverts black. Naked skin round the eye, bill, legs, and feet red. Tarsi armed with two pairs of long spurs, a third pair being sometimes present. Total length 12 inches, wing 6·1, tail 4·5, tarsus 2.

Adult female. Head blackish; feathers of the forehead and sides of the head with pale rufous centres; chin and throat white; quills and tail very similar to those of the male, but the latter has the feathers slightly mottled with rufous. Rest of the plumage chestnut, brightest on the breast, finely vermiculated with black. Tarsi with or without a pair of spurs. Total length 10·8 inches, wing 5·6, tail 3·8, tarsus 1·9.

Hab. Ceylon.

a. ♂ ad. sk.	Ceylon.	Purchased.
b, c. ♂ ♀ ad. sk.	Ceylon.	Hume Coll.
d–n. ♂ ♀ ad. sk.	Ceylon (*H. Nevill*).	Tweeddale Coll.
o–q. ♂ ♀ ad. sk.	Ragam Korale, W. Ceylon, June, Dec. (*Hart*).	Hume Coll.
r. ♂ ad. sk.	Kuruwitty, Ceylon, Dec. (*S. Chapman*).	Tweeddale Coll.
s. Ad. skel.	Ceylon.	

24. OPHRYSIA.

	Type.
Ophrysia, *Bonap. C. R.* xliii. p. 414 (1856)	O. superciliosa.
Malacortyx, *Blyth, Ibis*, 1867, p. 313	O. superciliosa.
Malacoturnix, *Blyth, P. Z. S.* 1867, p. 475	O. superciliosa.

Sexes different.

Tail composed of 10 feathers, well-developed, wedge-shaped; outer pair of feathers two-thirds the length of the middle pair.

1st primary much shorter than 10th; 5th or 6th longest.

Tarsus rather shorter than middle toe and claw.

Plumage long and soft.

Range. N.W. India.

1. Ophrysia superciliosa.

Rollulus superciliosus, *Gray, Knowls. Menag., Aves*, p. 8, pl. xvi. (1846).

Ophrysia superciliosa, *Bonap. C. R.* xliii. p. 414 (1856); *Hume, Str. F.* vii. p. 434 (1878); *Hume & Marsh. Game B. Ind.* ii. p. 105, pl. (1879) [Mussoorie, Naini Tal].

Ptilopachus (Ophrysia) superciliosa, *Gray, List Gallinæ Brit. Mus.* p. 45 (1867).

Malacoturnix superciliosus, *Blyth, P. Z. S.* 1867, p. 475 [Mussooree]; *Gould, B. Asia*, vii. pl. 8 (1868).

Malacortyx superciliaris, *Blyth, Ibis*, 1867, p. 313.

Coturnix (Ophrysia) superciliosa, *Gray, Hand-l. B.* ii. p. 269 (1870).

Adult male. Middle of the crown and nape pale brownish grey, each feather with a black shaft-stripe; sides black, separated from the black superciliary stripes on either side by a wide white band confluent with its fellow on the fore part of the head, which is also white; rest of the upper parts, wing-coverts, and scapulars grey, more or less washed with olive-brown, each feather margined on the sides with black; flight-feathers dark brown, the primaries more or less mottled with rufous buff on the margin of the outer webs; a white spot before and behind the eye, and a white band down each side of the throat commencing below the eye; rest of the plumage on the sides of the head, chin, and throat black; rest of underparts resemble the upper parts, but are somewhat greyer, except on the sides and flanks; under tail-coverts black, tipped and evenly spotted on either web with white. Tail dark olive-brown; bill coral-red; legs and feet dull red. Total length 9 inches, wing 3·5, tail 3, tarsus 1.

Immature males differ from the adult in having the last secondaries black, with a narrow buff shaft-stripe and transverse bars and marks like those of the female; a few of the feathers of the middle of the back are brown marked with black, and almost like those of the female.

Adult female. Upper parts warm light brown; some of the feathers of the middle of the head and all those of the nape and back of the neck with black shaft-stripes; a black band on each side of the crown; those of the back and rump with subterminal triangular black spots edged above with buff. Upper tail-coverts with irregular black blotches and intermediate buff bars along the shaft; the feathers of the lower back, rump, and upper tail-coverts are also finely mottled with black; wing-coverts and scapulars like the back; flight-feathers brown, mottled and irregularly barred on

the outer web with buff, except the first primary, which is uniform, and the last secondaries, which are barred on both webs. Lores, superciliary stripes, and sides of the head pale vinaceous grey; a white spot before and behind the eye; ear-coverts brown. Chin and throat whitish; rest of underparts like the back, but paler and more tawny, and the black spot on each feather takes more the form of a long oval; some of the flank-feathers are finely mottled with black; on the under tail-coverts the black middle extends irregularly to the base of the feathers; tail black, finely mottled and marked with buff. Total length 8·8 inches, wing 3·5, tail 2·7, tarsus 1.

Hab. N.W. India, Mussooree, and Naini Tal.

a–d. ♂ ♀ ad., ♂ imm. sk.	Jerepani, Mussooree, June, Nov., Dec. (*Hutton*).	Hume Coll.
e. ♂ ad. sk.	Budraj, Mussooree, Nov. (*K. Mackinnon*).	Col. L'Estrange [P.].
f. ♀ ad. sk.	Sherkadanda, Naini Tal, Dec. (*Carwithen*).	Hume Coll.

25. ITHAGENES.

	Type.
Ithaginis, *Wagl. Isis*, 1832, p. 1228	I. cruentus.
Plectropus, *Less. Comp. Buffon*, vii. p. 355 (1836)	I. cruentus.
Plectrophorus, *Gray, List Gen. B.* p. 61 (1840)	I. cruentus.
Itaginis, *Reichenb. Nat. Syst. Vög.* p. xxviii (1852)	I. cruentus.
Ithagenes, *Sund. Av. Tent.* p. 115 (1872)	I. cruentus.

Tail composed of 14 feathers, rather long, about four-fifths of the length of the wing, slightly rounded, the outer pair of feathers being about an inch shorter than the middle pair.

1st primary much shorter than the 2nd, which is about equal to the 10th; 5th slightly the longest.

Bill very short, strong, and stout: a large naked patch surrounds the eye; a full crest of elongate feathers.

Plumage long and soft, feathers lanceolate.

Tarsus rather longer than the middle toe and claw, with two or more pairs of spurs in the males; females without spurs, sometimes with a pair of blunt warts.

Range. Higher regions of Eastern Thibet, ranging south to Nepal, Sikhim, and Bhootan, west to Western Sze-chuen, and north to Ho-nan, Shen-si, and the north of the Nan-Shan Mts.

Key to the Species.

A. Breast pale green. (*Males.*)
  a. Longer median wing-coverts green.
    a'. Throat red ..... *cruentus*, p. 268.
    b'. Throat grey ..... *geoffroyi*, p. 269.
  b. Longer median wing-coverts rust-colour ..... *sinensis*, p. 270.
B. Breast not green. (*Females.*)
  c. Lores and forehead rust-colour; also the chin and throat ..... *cruentus*, p. 268.

d. Lores and forehead brownish.
c'. Throat brownish; breast pale greyish brown, finely vermiculated all over with brownish black ..... *geoffroyi*, p. 269.
d'. Throat dirty grey; breast pale brownish buff, with scarcely a trace of dark vermiculations. *sinensis*, p. 270.

1. Ithagenes cruentus.

Phasianus cruentus, *Hardwicke, Tr. Linn. Soc.* xiii. p. 237 (1822) [Nepal Hills].
Sanguine Pheasant, *Lath. Gen. Hist.* viii. p. 205 (1823).
Perdix cruenta, *Temm. Pl. Col.* v. pl. 31 [no. 332] (1825); *Less. Traité d'Orn.* p. 504 (1831).
Phasianus gardneri, *Hardwicke, Tr. Linn. Soc.* xv. p. 167 (1827) [Valley of Nepal].
Lophophorus gardneri, *Less. Man. d'Orn.* ii. p. 180 (1828).
Phasianus cruentatus, *Gray, in Griff. ed. Cuv.* iii. p. 47 (1829).
Perdix gardneri, *Gray, in Griff. ed. Cuv.* iii. p. 47 (1829).
Ithaginis cruentus, *Wagl. Isis*, 1832, p. 1228; *Gray, List of B.* pt. iii. *Gall.* p. 31 (1844); *id. Gen. B.* iii. p. 504 (1846); *Blyth, Cat. Mus. As. Soc.* p. 241 (1849); *Gould, B. As.* vii. p. 43 (1851); *Jerd. B. Ind.* iii. p. 522 (1863); *Gray, List Gallinæ Brit. Mus.* p. 46 (1867); *id. Hand-l. B.* ii. p. 264 (1870); *Elliot, Mon. Phas.* ii. pl. 30 (1872); *Hume & Marsh. Game B. Ind.* i. p. 155, pl. (1878); *Scully, Str. F.* viii. p. 343 (1879) [Nepal].
Perdix cruentatus, *Jard. Nat. Lib., Orn.* iv. p. 112, pl. vii. (1834).
Ithaginis cruentatus, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844); *Gray, Cat. Hodgs.* ed. i. p. 126 (1846).

Adult male. Lores and forehead black, top of the head buff or rufous buff; nape and mantle grey, each feather with a white shaft-stripe; lower back, rump, scapulars, lesser and shorter median wing-coverts the same, but the shaft-stripes are washed with green and edged with black; longer median wing-coverts have in addition the whole of the terminal half washed with green; upper tail-coverts widely margined with crimson. Quills and their coverts dark brown, each with narrow white shafts, somewhat dilated towards the extremity of the feather; the secondaries are narrowly margined on the outer web with whitish buff. Feathers enclosing the bare space round the eye mostly black, in some specimens partially margined with crimson; ear-coverts and sides of the neck white, edged with black; chin, throat, and cheeks crimson; fore part of the neck greenish white, edged with black; chest and breast * pale green, usually some of the feathers edged with crimson; belly and sides darker, the feathers of the latter with rather marked paler green shaft-stripes; flanks like the lower back; under tail-coverts crimson, tipped with greenish white. Tail-feathers white at the tip, shading into dusky brown towards the

* In specimens from Nepal the feathers of the chest and upper breast have the sides widely margined with crimson; this is also more or less well marked in those from Native Sikhim; but in birds from Sikhim and Darjeeling these crimson marks are only present on a few feathers, and often entirely absent.

base, the darker basal parts, except in the outer pair, being narrowly margined with a crimson fringe. Total length 15·6 inches, wing 8·3, tail 6·8, tarsus 2·6.

In *younger males* without spurs the crimson of the chin and throat is often mixed with black, the pale margins of the secondaries are more broken and less defined, and the tail-feathers are edged and mottled with black at the extremity.

In a *quite young male* the top of the head and throat are rufous buff, many of the feathers tipped with dull crimson; the plumage is greyish above, brownish below, all the feathers with pale shaft-stripes with scarcely a trace of green, and the quills and tail-feathers are dark brown, mottled with rufous and buff.

Adult female. Front and sides of the head, chin, and throat* rust-colour, back of the head and nape slate-grey, upper parts pale brown, finely mottled with blackish brown; quills dark brown, the secondaries mottled with pale rufous buff on the outer web; chest and rest of underparts reddish brown, paler on the sides, flanks, belly, and under tail-coverts, and finely mottled with blackish brown. Tail dark brown, mottled with pale rufous buff. Total length 11·5 inches, wing 7·7, tail 5·7, tarsus 2·3.

Hab. Higher regions of Nepal, Native Sikhim, Sikhim, and Western Bhootan; extending also into Thibet.

a, b. ♂ ♀ ad. sk.	Nepal.	Major-Gen. Hardwicke [P.]. (Types of the species.)
c–k. ♂ ♀ ad. sk.	Nepal.	B. H. Hodgson, Esq. [C.].
l. ♀ imm. sk.	Nepal.	Tweeddale Coll.
m. ♂ imm. sk.	Khatmandu, Nepal.	Tweeddale Coll.
n–p. ♂ imm. et juv. sk.	Dolaka, Nepal, Aug. (*L. Mandelli*).	Hume Coll.
q–n'. ♂ ♀ ad. et imm. sk.	Nat. Sikhim, Feb.–Apr., Aug., Oct.–Dec. (*L. Mandelli*).	Hume Coll.
o'. ♀ ad. sk.	Intr. of Nat. Sikhim (*L. Mandelli*).	Hume Coll.
p', q'. ♀ ad. et pull. sk.	Sikhim, May (*L. Mandelli*).	Hume Coll.
r'–b''. ♂ ♀ ad. et imm. sk.	Intr. of Sikhim, June, Oct. (*L. Mandelli*).	Hume Coll.
c''–q''. ♂ ♀ ad. et imm. sk.	Darjeeling, April.	Hume Coll.
r''. Pull. sk.	Thibet, Aug. (*L. Mandelli*).	Hume Coll.

2. Ithagenes geoffroyi.

Ithaginis geoffroyi, *Verr. Bull. Soc. d'Acclim.* (2) iv. p. 706 (1867); *Gray, Hand-l.* ii. p. 264 (1870); *Sclater, Ibis*, 1870, p. 297 [Tatsien-lou]; *David, N. Arch. Mus. Bull.* vii. p. 11. no. 358 (1871) [Moupin, Sze-chuen]; *Swinh. P. Z. S.* 1871, p. 400; *Gould, B. As.* vii. pl. 42 (1872); *Elliot, Mon. Phas.* ii. pl. 31 (1872); *Sclater,*

* In one specimen the chin and throat are washed with crimson.

Ibis, 1874, p. 169; *David & Oustal. Ois. Chine*, p. 401, pl. 113 (1877) [W. Sze-chuen, E. Thibet]; *Seebohm, Ibis*, 1891, p. 381 [W. Sze-chuen].

Adult male. Differs from the male of *I. cruentus* in having the long feathers on the top of the head and nape grey, with white shafts; the patch of green on the wing-coverts larger; the chin, throat, and chest grey; and the tail-feathers uniform whitish grey. Total length 17 inches, wing 7·7, tail 6, tarsus 2·6.

Adult female. Differs from the female of *I. cruentus* in having the front and sides of the head and chin and the throat brownish; the general tone of the upper parts rather greyer; the underparts similar to the upper, and finely vermiculated with blackish brown all over; the tail much more closely mottled with buff and indistinctly margined with crimson. Total length 16 inches, wing 7·1, tail 5·1, tarsus 2·5.

Hab. Higher regions of Eastern Thibet and Western Sze-chuen.

a, b. ♂ ♀ ad. sk.	Mountains of Moupin, Western Sze-chuen, China.	Purchased of M. Verreaux. (Types of the species.)

3. Ithagenes sinensis.

Ithaginis sinensis, *David, Ann. Sci. Nat.* (5) xviii. art. 5, p. 1 (1873) [Shen-si]. & xix. art. 9, p. 1 (1874); *id. Journ. Expl. Chin.* i. p. 174 (1875); *David & Oustal. Ois. Chine*, p. 402, pl. 114 (1877) [Shen-si and Ho-nan]; *Pleske, Bull. Acad. St. Pétersb.* xiii. p. 297 (1892) [North Nan-shan].

Ithaginis geoffroyi, *Prjev.* (*nec Verr.*) *Mongolia*, ii. p. 122 (1876); *id. in Rowl. Orn. Misc.* ii. p. 421 (1877) [Kansu Mts.].

Adult male. Differs from the male of *I. geoffroyi* in having the sides of the crest brownish black: the patch of colour on the wing-coverts rust-brown, some of the feathers being sometimes narrowly margined with crimson; the chin, throat, and fore part of neck blackish grey, shading into brownish grey on the chest, each feather with a narrow whitish shaft-stripe, those on the chin being washed with crimson. Total length 17·6 inches, wing 8, tail 7, tarsus 2·5.

Immature and *young males* generally resemble those of *I. cruentus*, but the brown patch on the wing-coverts is distinctly marked though mixed with black.

Adult female. Differs from the female of *I. geoffroyi* in having the upper parts browner, more like those of the female of *I. cruentus*, but paler; the chin and throat whitish grey; and the underparts pale brownish buff, scarcely vermiculated on the chest and breast. Total length 16·2 inches, wing 7·5, tail 5·9, tarsus 2·4.

Hab. North of the Nan-shan and Kan-su Mountains; Sinling Mountains between Shen-si and Ho-nan.

a, b. ♂ imm., ♀ ad. sk.	Shen-si, N. China, Dec. (*O. Finsch*).	Tweeddale Coll.
c–e. ♂ ♀ ad. et ♂ juv. sk.	Kan-su, Aug., Nov., Dec.	M. Berezowsky [C.].
f. ♂ ad. sk.	Kan-su, Feb. (*Prjevalsky*).	St. Petersburg Mus. [E.].
g. ♀ ad. sk.	Nan-shan Mts. (*Grum-Grzimailo*).	St. Petersburg Mus. [E.].

26. TRAGOPAN.

	Type.
Satyra, *Less.* (*nec Meig. Dipt.* 1803) *Dict. Sci. Nat.* lix. p. 196 (1828)	T. satyra.
Tragopan, *Cuv.* (*nec Möhr. Av.* 1752) *Règ. Anim.* éd. 2, i. p. 479 (1829)	T. satyra.
Ceriornis, *Sclater. Class. B.* ii. p. 341 (1837)	T. satyra.
Ceratornis, *Cab. in Ersch u. Grub. Encycl.* sec. 3, xxii. p. 150 (1846)	T. satyra.

Tail composed of 18 feathers, rather long, wedge-shaped, the outer pair about two-thirds of the length of the centre pair.

The 1st primary is shorter than the 10th and much shorter than the 2nd, which is about equal to the 8th or 9th; 4th or 5th slightly the longest.

The male has a short crest, a pair of elongate fleshy horns inserted above the eye, and a large gular flap, most prominent in the breeding-season and especially when the birds are excited by passion. Cheeks and throat thinly covered with hair-like feathers.

Sides of the head feathered.

Axillaries very long.

Tarsus equal to or slightly longer than the middle toe and claw, and armed in the male (rarely in the female) with a short stout spur.

Range. Northern India; Himalayas from Cashmere to Assam and N.E. Manipur; China, north to Shen-si, west to Sze-chuen, south to Quang-si, and east to Fo-kien.

Key to the Species.

A. Breast spotted with white or grey. (*Males* *.)	
a. With round white spots, surrounded with black.	
a'. General colour of the breast orange-carmine	*satyra*, p. 271.
b'. General colour of the breast black	*melanocephalus*, p. 273.
b. With oval grey or lavender spots, not surrounded with black. (General colour of breast orange-carmine.)	*temminckii*, p. 275.
B. Breast not spotted.	
c. Chest orange-red, breast dirty grey	*blythii*, p. 276.
d. Chest and breast buff	*caboti*, p. 277.

1. Tragopan satyra.

Horned Indian Pheasant, *Edw. Nat. Hist. B.* iii. pl. 116 (1750).
Phasianus bengalensis cornutus, *Briss. Orn.* vi. App. p. 14 (1760).
Meleagris satyra, *Linn. S. N.* i. p. 269 (1766); *Lath. Ind. Orn.* ii. p. 619 (1790); *Griff. ed. Cuv.* iii. pl. (1829).
Le Napaul ou Faisan cornu, *Buff. Hist. Nat. Ois.* ii. p. 362 (1771).

* I am unable to give a key to the plumage of the other sex, as the females of the last three species are not represented in the Collection.

Phasianus cornutus, *Müll. Suppl. Linn. S. N.* p. 125 (1776); *Steph. in Shaw's Gen. Zool.* xi. p. 239 (1819).
Horned Turkey, *Lath. Gen. Syn.* ii. pt. ii. p. 680 (1783); *Suppl.* i. p. 203 (1787).
Penelope satyra, *Gmel. S. N.* i. pt. ii. p. 733 (1788); *Bonnat. Tabl. Encycl. Méth.* i. p. 170, pl. 84. fig. 1 (1791).
Phasianus satyrus, *Temm. Pig. et Gall.* ii. p. 349 (1813), iii. p. 672 (1815); *Vieill. N. Dict. d'Hist. Nat.* xi. p. 39 (1817); *id. Gal. Ois.* ii. p. 23, pl. 206 (1825).
Horned Pheasant, *Lath. Gen. Hist.* viii. p. 208 (1823).
Tragopan satyrus, *Cuv. Règ. Anim.* i. p. 479 (1829); *Gray in Griff. ed. Cuv.* iii. p. 31 (1829); *Gould, Cent. B. Himal.* pl. 62 (1832); *Jard. Nat. Lib., Orn.* iv. p. 222, pl. xxiv. (1834); *Temm. Pl. Col.* v. pls. 13, 14 [nos. 543, 544] (1834); *Guérin, Icon. Règ. Anim., Ois.* p. 26, pl. 43. fig. 4 (1829–38); *Hodgs. in Gray's Zool. Misc.* p. 85 (1844).
Satyra satyra, *Less. Dict. Sci. Nat.* lix. p. 196 (1829); *id. Traité d'Orn.* p. 493 (1831).
? Phasianus nepaulensis, *Gray, in Griff. ed. Cuv.* iii. p. 29 (1829).
Satyra pennanti, *Gray, Ill. Ind. Zool.* i. pl. 49 (1830–32).
Satyra lathami, *Gray, Ill. Ind. Zool.* i. pl. 51 (1830–32); *Gray, List of B.* pt. iii. *Gall.* p. 28 (1844).
Phasianus melanocephalus, *Gray, Ill. Ind. Zool.* i. pl. 47 (1830–32).
Satyrus cornutus, *Schinz, Nat. Abbild. Vög.* p. 252, pl. 98 (1833).
Satyra nepaulensis, *Gray, Ill. Ind. Zool.* ii. pl. 40 (1834).
Tragopan melanocephalus, *Jard. Nat. Lib., Orn.* iv. p. 226, pl. xxvii. (1834).
Ceriornis macrolophus, *Swains. Class. B.* ii. p. 341 (1837).
Satyra cornuta, *Gray, List of Gen. B.* p. 78 (1841).
Ceriornis lathami, *Gray, Gen. B.* iii. p. 499 (1845).
Ceriornis satyra, *Gray, Cat. Hodgs.* ed. i. p. 125 (1846); *Blyth, Cat. Mus. As. Soc.* p. 240 (1849); *Sclat. & Wolf, Zool. Sket.* 2, pl. 39 (1861); *Jerd. B. Ind.* iii. p. 516 (1863); *Sclat. List of Phas.* p. 10 (1863) (Nepal, Sikhim, Bhotan); *Gray, List Gallinæ Brit. Mus.* p. 40 (1867); *Irby, Ibis*, 1868, p. 234 [Kumaon]; *Beavan, Ibis*, 1868, p. 379 [Sikhim]; *Gould, B. As.* vii. pl. 49 (1868); *Bulger, Ibis*, 1869, p. 169 [Sikhim, above 8000 ft.]; *Gray, Hand-l. B.* ii. p. 262 (1870); *Sclat. P. Z. S.* 1870, p. 164, *Elliot, Mon. Phas.* i. pl. 22 (1872); *Marie, P. Z. S.* 1872, p. 730, pls. lx., lxi.; *Hume, N. & E. Ind. B.* p. 521 (1873); *Marsh. B. Nest. Ind.* p. 59 (1877); *Hume & Marsh. Game B. Ind.* i. p. 137 (1878); *Scully, Str. F.* viii. p. 343 (1879) [Nepal]; *Sclat. P. Z. S.* 1879, p. 117, pl. viii. fig. 4; *Oates, ed. Hume's Nests & Eggs*, iii. p. 409 (1890).

Adult male. Top and sides of the head black; cheeks and throat thinly covered with black hairy feathers; sides of the occiput, mantle, chest, breast, and rest of underparts orange-carmine, the basal part, especially of the flank-feathers, black, irregularly barred with buff; each of the feathers of the lower parts of the mantle and chest and the rest of the underparts with a round white terminal spot edged externally with black, except on the belly, where the black margin is partially or entirely absent; back, scapulars, inner wing-coverts, rump, and upper tail-coverts olive-brown at the extremity and black barred with buff towards the base, each feather with a white black-edged spot at the tip; rest of wing-coverts the same, but edged on each side with dark orange-carmine.

Quills and primary-coverts black, barred on both webs with rufous buff; bastard-wing pale orange-red tipped with black; lesser and median under wing-coverts orange-red. Tail black, the basal part barred and variegated with buff. Bill blackish brown; upper throat and orbits purplish blue; gular wattle orange or salmon with transverse blue bars; horns greenish blue; legs and toes pale flesh-colour. Total length 26 inches, wing 10·2, tail 9·5, tarsus 3·3.

Immature males resemble the female, but the orange-red feathers of the male are more or less developed on the neck and sides of the occiput; some of the black feathers of the head are likewise present, and some of the feathers of the back and scapulars are spotted with white at the extremity.

Adult female. General colour above black mottled with buff, rufous-buff, and sandy, many of the feathers of the back, scapulars, and wing-coverts with buff shaft-spots; on the wings the rufous-buff tint predominates. Quills as in the adult male. Chin and throat white or buff; underparts sandy and buff finely mottled with lines of black, most of the feathers with whitish or buff triangular shaft-spots. Tail black, irregularly mottled and barred with buff and rufous-buff. Total length 19·5 inches, wing 9, tail 7·1, tarsus 2·9.

In a *quite young* specimen nearly all the feathers of the upper and under parts have rufous shaft-stripes.

Hab. The higher ranges of the Himalayas from Kumaon and Western British Gurhwal, through Nepal and Sikhim to Bhotan.

a–d. ♂ ♀ ad. et imm. sk.	India.	Hardwicke Coll.
e. ♂ ad. sk.	Kumaon.	Hume Coll.
f–u. ♂ ♀ ad., imm., et pull. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
v. ♂ ad. sk.	Nepal, June (*J. Scully*).	Hume Coll.
w. ♂ ad. sk.	Nepal, March (*L. Mandelli*).	Hume Coll.
x–z. * ♀ ad. et juv. sk.	Dolaka, Nepal, Jan., July (*L. Mandelli*).	Hume Coll.
a′–h′. ♂ ♀ ad. sk.	Native Sikhim, Jan. to May, Oct., Dec. (*L. Mandelli*).	Hume Coll.
i′–m′. ♂ ♀ ad. sk.	Sikhim, Feb., April, June (*L. Mandelli*).	Hume Coll.
n′–v′. ♂ ♀ ad. et imm. sk.	Darjeeling, Feb., March, April.	Hume and Salvin-Godman Colls.
w′, *x′.* ♀ ad. et pull. st.		Zool. Soc. Coll.
y′, *z′.* ♂ ad. skeletons.	Nepal.	B. H. Hodgson, Esq. [P.].
a″–d″. Skeletons.		

2. Tragopan melanocephalus.

Phasianus melanocephalus, *Gray, in Griff. ed. Cuv.* iii. p. 29 (1829) (Almorah).

* One assuming the male plumage.

Satyra melanocephala, *J. E. Gray, Ill. Ind. Zool.* i. pls. 46, 48 (1830–32); *G. R. Gray, List of B.* pt. iii. *Gall.* p. 28 (1844).

Tragopan hastingsi, *Vig. P. Z. S.* 1830, p. 8; *Gould, Cent. B. Himal.* pls. 63, 64, 65 [text] (1832); *Jard. Nat. Lib., Orn.* iv. p. 224, pls. xxv., xxvi. (1834); *Hutton, J. A. S. B.* xvii. pt. 2, p. 695 (1848); *Schinz, Nat. Vög.* p. 147, pl. 70 (1853); *Fitz. Atl. Nat. Vög.* fig. 232 (1864).

Ceriornis melanocephala, *Gray, Gen. B.* iii. p. 499 (1845); *id. Cat. Hodgs.* ed. i. p. 125 (1846); *Blyth, Cat. Mus. As. Soc.* p. 240 (1849); *Gould, B. As.* vii. pl. 45 (1855); *Adams, P. Z. S.* 1858, p. 498 [N.W. Himalayas]; *id. P. Z. S.* 1859, p. 185 [Pinjal Range]; *Jerd. B. Ind.* iii. p. 517 (1863); *Sclat. List of Phas.* p. 10, pl. 10 (1863) [N.W. of Simla and S. Cashmere]; *Gray, List Gallinæ Brit. Mus.* p. 41 (1867); *v. Pelz. Ibis*, 1868, p. 320 [Koteghur]; *Beavan, Ibis*, 1868, p. 380 [Simla]; *Sclat. P. Z. S.* 1870, p. 164; *Gray, Hand-l. B.* ii. p. 262 (1870); *Elliot, Mon. Phas.* i. pl. 23 (1872); *Hume, N. & E. Ind. B.* p. 522 (1873); *Brooks, Str. F.* iii. p. 256 (1875) [Mussooree and Gangaotri]; *Marsh. B. Nest. Ind.* p. 59 (1877); *Hume & Marsh. Game B. Ind.* i. p. 144, pl. (1878); *Marsh. Ibis*, 1884, p. 422 [Chamba]; *Oates, ed. Hume's Nests & Eggs*, iii. p. 410 (1890).

Adult male. Differs from *T. satyra* chiefly in having a much longer black occipital crest tipped with dull Indian red; no red on the sides of the occiput; only the sides and back of the neck dark Indian red; a patch of dark red on the upper wing-coverts of the shoulder only; the bastard-wing black, barred with buff like the quills; the white subterminal spots of the longer upper tail-coverts surrounded with rufous; the neck and upper part of chest shining orange-scarlet, the feathers being unusually stiff and hard; the feathers of the rest of the underparts black at the extremity and dark red irregularly barred with black towards the base, except the flank-feathers, which have the basal part barred with black and buff; each feather with a round subterminal white spot. Bill blackish; naked skin round the eye bright red; fleshy horns sky-blue; gular flap purple in the middle, flesh-coloured on the sides, spotted and edged with pale blue; legs and feet livid flesh-colour. Total length 27 inches, wing 10·8, tail 9·2, tarsus 3·1.

Immature males resemble the females in general plumage, but the head is suffused with black and the neck with dull orange-red, and most of the feathers of the upper parts and all those of the under have a round subterminal white spot edged with black.

Adult female differs from the female of *T. satyra* in having the general tone of the plumage much greyer, with very little rufous buff even on the wings and underparts.

Hab. Higher ranges of the Western Himalayas from Native Gurhwal westwards to Cashmere.

a. ♂ imm. sk.	Cashmere (*J. Biddulph*).	Tweeddale Coll.
b, c. ♂ ♀ ad. sk.	Snow range, Himalayas, Nov.	Hume Coll.
d–t. ♂ ♀ ad. et imm. sk.	Koteghur, March, April, Oct.	Hume Coll.
v–a′. ♂ ♀ ad. et imm. sk.	Kooloo, Feb., April.	Hume Coll.

b'. ♀ ad. sk.	N.W. of Simla (*S. Pinwill*).	Tweeddale Coll.
c'. ♂ ad. sk.	Interior of Simla Hills, April (*R. C. Beavan*).	Tweeddale Coll.
d', *e'*. ♂ ad. et imm. sk.	Simla.	Capt. S. Pinwill [P.].
f'. ♀ ad. sk.	Simla, Sept. (*A. O. H.*).	Hume Coll.
g'. ♂ ad. sk.	N.W. Himalayas.	B. H. Hodgson, Esq. [P.].
h', *i'*. ♂ ♀ ad. sk.	N.W. Himalayas.	India Museum [P.].
j'–*m'*. ♂ ad. sk.; ♀ ad. et ♂ imm. st.	Himalayas.	Ronald Ferguson, Esq. [P.].
n'. ♂ ad. sk.	Almorah.	Major General Hardwicke [P.]. (Type of the species.)

3. Tragopan temminckii.

Satyra temminckii, *J. E. Gray, Ill. Ind. Zool.* i. pl. 50 (1830–32); *G. R. Gray, List of B.* pt. iii. *Gall.* p. 28 (1844).

Tragopan temminckii, *Benn. P. Z. S.* 1834, p. 33.

Ceriornis temminckii, *Gray, Gen. B.* iii. p. 499 (1845); *Blyth, Cat. Mus. As. Soc.* p. 240 (1849); *Swinh. P. Z. S.* 1863, p. 307; *Sclat. List of Phas.* p. 11, pl. 11 (1863) [China]; *Gray, List Gallinæ Brit. Mus.* p. 41 (1867); *Gould, B. Asia*, vii. pl. 46 (1869); *Gray, Hand-l. B.* ii. p. 262 (1870); *Sclat. P. Z. S.* 1870, p. 164 [N. & E. Sze-chuen to C. China]; *Jerd. Ibis*, 1870, p. 147 [Upper Assam]; *David, N. Arch. Mus. Bull.* vii. p. 11 (1871) [Sze-chuen]; *Swinh. P. Z. S.* 1871, p. 399; *Elliot, Mon. Phas.* i. pl. 24 (1872); *David & Oustal. Ois. Chine*, p. 118, pl. 112 (1877) [S.W. China to S. Shen-si]; *Hume, Str. F.* viii. p. 201 (1879) [Mishmi Hills]; *Sclat. P. Z. S.* 1879, p. 117, pl. viii. fig. 3; *Seebohm, Ibis*, 1891, p. 379 [W. Sze-chuen].

Adult male. Differs from the male of *T. satyra* in having the orange-red occipital crest longer, the terminal part of the feathers of the upper parts Indian red and the subterminal spots pale pearl-grey instead of white; the bastard-wing reddish buff, the inner webs barred and mottled with black; the longer upper tail-coverts brown, greyish towards the extremity, and margined all round with dark Indian red; the sides and fore part of the neck, shoulders, and lesser under wing-coverts reddish buff; the outer half of the feathers of the rest of the underparts Indian red, each with a large subterminal grey spot; and only the feathers on the sides of the breast have this spot surrounded by black. Bill black; horns blue; gular flap rich deep blue, barred with red on the outer margins; legs and feet red. Total length 25 inches, wing 9·9, tail 7·8, tarsus 3·2.

Adult female. Appears to bear a close resemblance to the female of *T. satyra*.

Hab. South-west and Central China; ranging from the Mishmi Hills through Sze-chuen to South Shen-si and Hoo-pee.

a. ♂ ad. sk.	China.	J. R. Reeves, Esq. [P.].
b. ♂ ad. sk.	China.	J. R. Reeves, Esq. [P.]. (Type of the species.)

c. ♂ ad. sk.	Mishmi Hills.	Hume Coll.
d, *e*. Pull. st.		Zoological Soc. Coll.

Hybrid between Tragopan temminckii *and* Catreus wallichi.

a. Pull. st.	No locality.	J. J. Stone, Esq.

4. Tragopan blythi.

Ceriornis temminckii, *Jerd.* (*nec Gray*) *Ibis*, 1870, p. 147 [Upper Assam]; *Newton*, *Ibis*, 1870, p. 520.

Ceriornis blythi, *Jerd. P. As. Soc. Beng.* 1870, p. 60; *Sclat. P. Z. S.* 1870, pp. 163, 219, pl. 15; *id. Ibis*, 1870, p. 520; *Gray*, *Hand-l. B.* ii. p. 262 (1870); *Gould*, *B. Asia*, vii. pl. 47 (1872); *Elliot*, *Mon. Phas.* i. pl. 26 (1872); *Godw.-Aust. P. Z. S.* 1872, p. 496 [Naga Hills]; *Hume*, *Str. F.* vii. p. 472 (1878) [♀ described]; *Hume & Marsh. Game B. Ind.* i. p. 152, pl. (1878); *Godw.-Aust. Ibis*, 1878, p. 206 [Mozemah]; *id. P. Z. S.* 1879, p. 457, pl. xxxix.; *Sclat. P. Z. S.* 1884, p. 477; *Hume*, *Str. F.* xi. p. 301 (1888) [N.E. Manipur].

Adult male. Differs from the male of *T. satyra* chiefly in the following points:—The orange-red feathers on the sides of the head form superciliary stripes commencing above the anterior part of the eye and joining one another posteriorly in an occipital crest, as in *T. melanocephalus*; the orange-carmine round the neck does not extend on to the mantle; the terminal part of the feathers of the upper parts, on each side of the white spot, is very dark Indian red instead of olive-brown; the longer upper tail-coverts have the white subterminal spots surrounded with reddish brown as in *T. melanocephalus*; the sides of the face, chin, and throat are almost entirely naked. The fore part of the neck and chest are orange-carmine; breast and belly smoky grey or greyish buff; sides and flanks like the upper parts. Bill black, orbital skin orange; horns azure; gular flap brimstone tinged with blue; legs and feet light brown tinged with pink. Total length 24 inches, wing 10·2, tail 7·4, tarsus 3·2.

Adult female. Apparently nearly resembles the female of *T. satyra*, but has the upper surface blacker and less ferruginous, and the lower surface is paler and without the ferruginous buff. From the female of *T. melanocephalus* it is said to be distinguished by the black and buff of the upper surface, which are much richer and darker in tone.

The female specimen obtained by Mr. Hume from Mr. G. Damant and described by the former in the 'Birds of India' is not to be found among the specimens in the Hume Collection.

Hab. Higher ranges of North-east Assam, east of the Burrail range, and southwards to North-east Manipur.

a. ♂ ad. sk.	Sadiya, Upper Assam.	T. C. Jerdon, Esq. [P.]. (Type of the species.)
b. ♂ ad. sk.	Kohima, Naga Hills (*G. Damant*).	Hume Coll.
c. ♂ imm. sk.	Samaguteng, Naga Hills, Dec. (*G. Damant*).	Hume Coll.

d. ♂ ad. sk.	Manipur.	Dr. G. Watt [P.].
e. ♂ imm. sk.	Bred in confinement.	J. J. Stone, Esq. [P.]

5. Tragopan caboti.

Ceriornis caboti, *Gould, P. Z. S.* 1857, p. 161 [China]; *id. B. As.* vii. pl. 48 (1858): *Swinh. P. Z. S.* 1863, p. 307; *Sclat. List of Phas.* p. 11 (1863) [? China]; *Swinh. Ibis*, 1865, p. 350 [Hills of Quang-si ?]; *Sclat. P. Z. S.* 1870, p. 164; *Gray, Hand-l. B.* ii. p. 262 (1870); *Swinh. P. Z. S.* 1871, p. 399; *Salvad. P. Z. S.* 1871, p. 695; *Elliot, Mon. Phas.* i. pl. 25 (1872); *David & Oustal. Ois. Chine*, p. 419, pl. 111 (1877) [Mts. between Fo-kien and Kiang-si].

Ceriornis modestus, *David MS., David & Oustal. Ois. Chine*, p. 419 (1877).

Adult male. Head very similar to that of *T. blythi*, but the black feathers of the back of the head cover also the nape; the feathers of the upper parts differ in having the spot at the extremity of each terminal and buff-coloured, the edges maroon, and one or two irregular white spots or short cross bars on the basal part of the shaft. The quills and tail-feathers are more coarsely barred and mottled with buff than in any of the other species of the genus. As in *T. blythi* the sides of the face, chin, and throat are naked. Chest, breast, and belly buff, mottled with black and buff and edged with Indian red towards the base; sides and flanks much like the feathers of the upper parts. Total length ca. 23 inches, wing 9·2, tail ca. 6·8, tarsus 2·9.

Adult female is said to resemble the female of *T. temminckii*.

Hab. South-eastern China: mountains between Fo-kien and Kiang-si; also the hills in the interior of Quang-si ?

a. ♂ ad. sk.	China.	Purchased.

27. LOPHOPHORUS.

	Type.
Lophophorus, *Temm. Pig. et Gall.* ii. p. 355 (1813) ..	L. refulgens.
Monaulus, *Vieill. Analyse*, p. 51 (1816)	L. impeyanus.
Lophofera, *Fleming, Philos. Zool.* ii. p. 230 (1822)....	L. impeyanus.
Impeyanus, *Less. Traité d'Orn.* p. 488 (1831)	L. refulgens.
Chalcophasis, *Elliot, Monogr. Phas.* i. pl. xx. or pt. iv. (1871)	L. sclateri.

Tail composed of 18 feathers, of moderate length, and rounded, the outer pair about an inch and a half shorter than the middle pair.

The 1st primary considerably shorter than the 10th; 2nd about equal to the 8th; 5th slightly the longest.

Head of male with an elongate crest of feathers or without a crest, all the feathers of the top of the head being curled (as in *Manucodia comrii*).

Nearly naked space round the eye.

Tarsus shorter than the middle toe and claw, armed in the male with a stout spur.

Range. Himalayas from Eastern Afghanistan to North-east Assam and northwards to Western Sze-chuen and Eastern Koko-nor.

Key to the Species.

I. Most of the upper plumage metallic. (*Males.*)
  A. Whole tail chestnut; crest of spade-shaped metallic-green feathers.
    a. Lower back white; underparts black ..... *refulgens*, p. 278.
    b. Lower back golden green, each feather edged with violet and purple; underparts metallic golden green, shading into dark bluish green on the sides and flanks ..... *impeyanus**, p. 280.
  B. Tail bluish green, glossed with blue and purple, inner and middle parts of the feathers black with a row of irregular white spots on each side of the shafts; crest of ordinary elongate purple feathers. (Lower back white, underparts black.) ..... *l'huysii*, p. 281.
  C. Tail chestnut, with a wide white terminal band and the basal part black, barred and irregularly mottled with buff; top of the head covered with curly metallic-green feathers. (Lower back white; underparts black.) .... *sclateri*, p. 282.

II. None of the plumage metallic. (*Females.*)
  D. Lower back with alternate irregular bars of black and rufous buff more or less parallel with the edge of the feathers..... *refulgens*, p. 278.
  E. Lower back white..... *l'huysii*, p. 281.
  F. Lower back pale ochraceous white finely mottled with dark brown ..... *sclateri*, p. 282.

1. Lophophorus refulgens.

Lophophorus refulgens, *Temm. Pig. et Gall.* ii. p. 355 (1813), iii. p. 673 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 249, pl. 15 (1819); *Griff. ed. Cuv.* iii. p. 14 (1829); *Temm. Pl. Col.* v. pls. 11, 12 [nos. 508, 513] (1830); *Schinz, Nat. Abbild. Vög.* p. 252, pl. 97 (1833); *id. Nat. Vög.* p. 152, pl. 74 (1853); *Sclat. P. Z. S.* 1868, p. 1.

Impeyanus refulgens, *Less. Traité d'Orn.* p. 488, pl. 85 (1831).

Lophophorus impeyanus, *Gould* (*nec Lath.*), *Cent. B. Himal.* pls. 60, 61 (1832); *Jard. Nat. Lib., Orn.* iv. p. 219, pls. xxii., xxiii. (1834); *Vigne, P. Z. S.* 1841, p. 6 [Cashmere & Himalaya]; *Gray, Gen. B.* iii, p. 502 (1844); *id. List of B.* pt. iii. *Gall.* p. 30 (1844); *id. Cat. Hodgs.* ed. i. p. 125 (1846); *Hutton, J. As. Soc. Beng.* xvii. pt. 2, p. 695 (1848); *Blyth, Cat. Mus. As. Soc.* p. 246 (1849); *Gould, B. Asia*, vii. p. 53 (1850); *Adams, P. Z. S.* 1858, p. 500 [near Simla]; *Mitch. P. Z. S.* 1858, p. 544, pl. 147. fig. 2, & pl. 149. fig. 5; *Adams, P. Z. S.* 1859, p. 185 [Cashmere]; *Irby, Ibis*, 1861, p. 235 [Kumaon]; *Jerd. B. Ind.* iii. p. 510 (1863); *Sclat. List Phas.* p. 3 (1863); *Fitz. Atl. Nat. Vög.* fig. 229 (1864); *Gray, List Gallinæ Brit. Mus.* p. 37 (1867); *Tytler, Ibis*, 1868, pp. 191, 194, 203 [Simla to Mussooree]; *v. Pelz. Ibis*, 1868, p. 320 [Koteghur]; *Beavan, Ibis*, 1868, p. 379 [Simla, Sikhim]; *Gray, Hand-l. B.* ii. p. 261 (1870); *Elliot, Mon. Phas.* i. pl. 18 (1872); *Hume, N. & E. Ind. B.* p. 520 (1873); *Brooks, Str. F.* iii. p. 256 (1875) [Mussooree and Gangaotri Hills]; *Wilson, Str. F.* iv. p. 227 (1876); *Marsh.*

* The female of this species is as yet unknown.

B. Nest. Ind. p. 59 (1877); *Hume & Marsh. Game B. Ind.* i. p. 125, pl. (1878); *Scully, Str. F.* viii. p. 342 (1879) [Nepal]; *Fairbroth. Str. F.* ix. p. 203 (1880) [Kurrum, Afghanistan]; *Wurdl.-Rams. Ibis*, 1880, p. 70 [E. Afghanistan]; *Oates, ed. Hume's Nests & Eggs*, iii. p. 407 (1890).

Lophophorus impeyanus, v. refulgens, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844).

Adult male. Top and sides of the head, crest of spade-shaped feathers, and a patch of feathers between the sides of the breast and mantle metallic green shot with blue and purple; back and sides of the neck purple, shading into reddish copper and glossed with golden green; mantle shining golden green; outer wing-coverts metallic bluish green; inner wing-coverts and scapulars, rump and shorter upper tail-coverts bronze-crimson in some lights and purple edged with metallic bluish green in others; longer upper tail-coverts golden green; lower back snow-white; quills and bastard-wing brownish black; throat blackish, slightly glossed with golden green; rest of the underparts black; tail pale rufous, darker towards the extremity. Bill black, cutting-edges of the mandibles pale horny; orbital skin bright blue; legs and feet dusky greenish or pale yellowish green. Total length 26 inches, wing 11·6, tail 9, tarsus 3·2.

Immature males resemble the females, but the chin and throat are usually more or less suffused with black, the markings on the underparts are coarser, and the whitish-buff shaft-stripes on the feathers are wider. In several cases at least some of the adult feathers appear to be obtained by a change of pattern without a moult.

Adult female. Feathers of the top of the head, short crest, neck, mantle, and rump black, buff down the middle and often, especially on the mantle, with an irregular black shaft-stripe or a black stripe on each side of the shaft meeting one another anteriorly; wing-coverts and scapulars the same, but the black lines in the buff centre part are still more irregular and broken up into bars and mottlings; feathers of the lower back alternately barred with irregular black and buff, the bars more or less parallel to the edge of the feather; upper tail-coverts black barred with buff, the longer ones tipped with white freckled with black; quills blackish brown, the primaries slightly mottled with buff on the margin of the outer web, and the secondaries on both are margined at the tips with whitish buff. Sides of the head reddish buff mottled with black; chin and throat white; feathers of chest and sides of breast like the mantle; rest of underparts mottled with black and buff and with more or less distinct white shaft-stripes. Tail black barred with rufous, and margined at the extremity with white, the black parts of the middle pair of feathers being mottled, especially towards the margins, with buff. Total length 23 inches, wing 10·5, tail 7·5, tarsus 2·6.

Hab. Elevated forests of the Himalayas from Eastern Afghanistan to Western Bhootan.

a. ♂ ad. sk.	Chitral, Kafiristan, April.	Colonel Biddulph [C.].
b–*d*. ♂ ad. var. et ♂ imm. sk.	Chamba, S. Cashmere.	Colonel C. H. T. Marshall [P.].
e–*g*. ♂ ♀ ad. et pull. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
h–*n*. ♂ ♀ ad. et imm. sk.	Kooloo, Feb., April, Nov.	Hume Coll.
o–*e'*. ♂ ♀ ad. et imm. sk.	Koteghur, March, April, and Oct.	Hume Coll.
f'. ♀ ad. sk.	Simla, Nov. (*W. Davison*).	Hume Coll.
g'–*i'*. ♂ ♀ ad. et imm. sk.	Kumaon (*Capt. Strachey*).	India Museum [P.].
j', *k'*. Juv. sk.	Kumaon.	Hume Coll.
l'. ♂ imm. st.	Nepal.	Purchased.
m', *n'*. ♂ imm. sk.	Nepal, Dec. and Jan. (*L. Mandelli*).	Hume Coll.
o'–*u'*. ♂ ♀ ad. et imm. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
v'–*x'*. ♂ ad. et juv. sk.	Dolaka, Nepal, Jan. and Aug. (*L. Mandelli*).	Hume Coll.
y'–*q''*. ♂ ♀ ad. sk.	Nat. Sikhim, Jan.–April, July, Oct. and Nov. (*L. Mandelli*).	Hume Coll.
r''–*s''*. ♂ imm. et ♀ ad. sk.	Sikhim (*L. Mandelli*).	Hume Coll.
t''. ♂ ad. sk.	Int. of Sikhim, May (*L. Mandelli*).	Hume Coll.
u'', *v''*. ♂ ♀ imm. sk.	Darjeeling (*Eccles*).	Salvin-Godman Coll.
w''–*y''*. ♂ imm. sk.	Himalayas.	Tweeddale and Sharpe Colls.
z''. ♂ ad. st.	Himalayas.	Ronald Ferguson, Esq. [P.].
a^3–e^3. Juv. sk. et pull. st.		Zoological Society's Coll.
f^3–i^3. Skeletons.		
k^3. Imperfect skel.	Nepal.	B. H. Hodgson, Esq. [P.].

2. Lophophorus impeyanus.

Impeyan Pheasant*, *Lath. Gen. Syn. Suppl.* i. p. 208, pl. 114 (1787); *id. Gen. Hist.* viii. p. 210, pl. 125 (1823).
Phasianus impejanus, *Lath. Ind. Orn.* ii. p. 632 (1790).
Phasianus impeyanus, *Bonnat. Tabl. Encycl. Méth.* i. p. 186, pl. 88. fig. 1 (1791).
Phasianus curvirostris, *Shaw, Mus. Lever.* p. 101, pl. (1792).
Monaulus impejanus, *Vieill. N. Dict. d'Hist. Nat.* xxi. p. 322 (1818).
Monaulus impeyanus, *Vieill. Gal. Ois.* ii. p. 31, pl. 208 (1825).
Lophophorus impeyanus, *v. Pelz. Ibis*, 1873, p. 120; *Marsh. Str. Feath.* ix. p. 203 (1880) [Chamba].
Lophophorus chambanus, *Marsh. Ibis*, 1884, p. 421 [Chamba].

* Latham particularly mentions that in his specimen "the back and wing-coverts are rich purple, tipped with green bronze," and the underparts and thighs dull black with here and there a greenish gloss. A glance at his figure will at once show that his description refers to the bird from Chamba, and not to *L. refulgens*, Temm.

Adult male. Differs chiefly from *L. refulgens* in having the feathers of the lower back golden green, shading into purplish blue towards their extremities; the longer upper tail-coverts dark chestnut with golden-green tips; the purplish golden-bronze of the sides of the neck nearly meeting in front; the chin, throat, and fore part of neck glossed with pale greenish gold, and the chest and rest of underparts metallic golden green, shading into dark bluish green on the sides, flanks, and under tail-coverts. Total length 26 inches, wing 11·5, tail 9, tarsus 3.

Hab. Chamba, South Cashmere.

a. ♂ ad. sk.	Chamba, S. Cashmere, Feb.	Col. C. H. T. Marshall [P.]. (Type of *L. chambanus*, Marsh.)
b, c. ♂ vix ad. sk.	Chamba, S. Cashmere.	Col. C. H. T. Marshall [P.].

3. Lophophorus l'huysii.

Lophophorus l'huysii, *Verr. & Geoff. St.-Hil. Bull. Soc. Acclim.* (2) iii. p. 223, pl. (1866) [Moupin Dist.], iv. p. 706 (1867); *Scl. P. Z. S.* 1868, p. 1, pl. i.; *id. Ibis*, 1870, p. 297 [Ta-tsien-lou]; *Gray, Hand-l. B.* ii. p. 261 (1870); *Swinh. P. Z. S.* 1871, p. 399; *David, N. Arch. Mus. Bull.* vii. p. 11 (1871); *Elliot, Mon. Phas.* i. pl. 19 (1872); *Gould, B. As.* vii. pl. 54 (1873); *Sclater, Ibis*, 1874, p. 169; *David & Oustal. Ois. Chine*, p. 403, pl. 110 (1877) [Moupin, E. Koko-nor & W. Sze-chuen]; *Seebohm, Ibis*, 1891, p. 379 [W. Sze-chuen].

Adult male. Differs from *L. refulgens* in the following points:— The occipital crest is purple-bronze and composed of ordinary elongate feathers; the back of the neck and upper part of the mantle are dark red-gold, shading into bronze-purple shot with greenish blue on the lower part of the mantle; the scapulars and wing-coverts are not so purple and are shot with metallic golden green; the rump-feathers resemble the wing-coverts, but are margined with white; the long upper tail-coverts, the outer part of both webs of the central pair of tail-feathers, the outer half of the outer webs of the rest, and the extremities of all bluish green shot with blue and purple; the rest of the tail-feathers (the middles of the centre pair, and the greater part of inner web and the inner half of the outer web of the rest) black, irregularly spotted on each side of the shaft with white. Bill horn-colour; naked skin round the eye blue; legs and feet lead-colour. Total length 30 inches, wing 12·6, tail 10·3, tarsus 3·3.

Adult female. May be distinguished at a glance from the female of *L. refulgens*, the whole of the lower back being pure white.

Hab. Western Sze-chuen and Eastern Koko-nor.

a, b. ♂ ♀ imm. sk.	Mountains of Moupin, Western Sze-chuen (*Dabry*).	Purchased of M. Verreaux. (Types of the species.)

4. Lophophorus sclateri.

Lophophorus sclateri, *Jerdon, Ibis*, 1870, p. 147 [Mishmi Hills]; *id. J. As. Soc. Beng.* 1870, p. 61; *Sclat. P. Z. S.* 1870, p. 162, pl. xiv.; *Gray, Hand-l. B.* ii. p. 261 (1870); *Elliot, Mon. Phas.* i. pl. 20 (1872); *Hume, Str. F.* ii. p. 488 (1874) [E. Assam]; *Hume & Marsh. Game B. Ind.* i. p. 136, pl. (1878) [Hills E. & S.E. of Sadiya]; *Godw.-Aust. P. Z. S.* 1879, p. 681, pl. li. [Sadiya, Eastern Assam]; *Hume, Str. F.* ix. p. 203 (1880) [Mishmi Hills]; *id. Str. F.* xi. p. 301 (1888).

Chalcophasis sclateri, *Elliot, Mon. Phas., Introd.* p. xix (1872); *Gould, B. Asia*, vii. pl. 55 (1873).

Adult male. Top of the head covered with curly bluish-green feathers shot with purple and gold; ear-coverts the same but not curled; back and sides of neck reddish copper with dull green reflections; mantle, longer scapulars, and median and greater secondary wing-coverts metallic green with purple reflections; patch of lesser wing-coverts at the angle of the wing brilliant metallic dark green shot with blue and purple; shorter scapulars and rest of lesser wing-coverts golden green and reddish copper; quills and primary-coverts black, the secondaries slightly glossed with bronze-green on the outer web; lower back, rump, and upper tail-coverts white, the two former mostly with narrow dark shaft-stripes; chin, throat, fore part of neck, and rest of underparts rich black, with a slight purplish gloss on the sides and flanks; tail chestnut, with a white terminal band an inch and a quarter wide, the basal part of the feathers black irregularly barred and mottled with buff. Bill yellowish horny; forehead, lores, and sides of the head bright blue, nearly naked; legs and feet yellowish brown. Total length 26 inches, wing 11·8, tail 8·2, tarsus 3·1.

Adult female. Head and neck very rich dark umber-brown, each feather of the former with a V-shaped pale ochre mark: each of the latter has a centre line of richer brown, finely mottled towards the margins. A broad extent of the rump and upper tail-coverts pale ochraceous white, very finely, delicately mottled with dark brown. Tail above rich black, with six or seven narrow whitish bars and tipped with the same (the counter colouring of male); shoulder of wing very rich dark chestnut-brown, the shafts pale ochraceous. Primaries rich dark umber; secondaries slightly mottled with brown. Cheeks and throat dark umber, markings like those on the head; chin white; breast, abdomen, and thighs dull umber, most delicately and finely mottled with pale ochre. Underside of tail black, with narrow white bars. The legs appear to have been of a pale grey and the bill whitish. [*Godwin-Austen.*] Wing 11·5 inches, tail 8, tarsus 3.

Hab. Hills east and south-east of Sadiya, N.E. Assam.

a. ♂ ad. sk.	Mishmi Hills, Upper Assam, Nov. (*Jerdon*).	Zool. Soc. Coll. (Type of the species.)
b. ♂ ad. sk.	Mishmi Hills, Dec. (*Sir S. Bayley*).	Hume Coll.

28. ACOMUS.

	Type.
Houppifer, *Guérin-Méneville, Icon. Règ. Anim., Ois.* p. 26 (1829–38)	A. erythrophthalmus.
Alectryon, *Cab.* (*nec Montf., Moll.* 1810) *in Ersch u. Grub. Encycl.* sec. 3, xxii. p. 147 (1846)	A. pyronotus.
Acomus, *Reichenb. Nat. Syst. Vög.* p. xxx (1852)	A. erythrophthalmus.
Houppifer us, *Elliot, Mon. Phas., Introd.* p. xxi (1872)	A. erythrophthalmus.

Tail composed of 14 feathers, rather short, laterally compressed and hen-like; the third pair are very slightly longer than the middle and very much longer than the outer pair.

1st primary considerably shorter than the 2nd, which is about equal to the 10th; 6th slightly longest.

Head without a crest.

A large naked patch on each side of the head. No wattles.

Male and female with a pair of stout spurs. Female black *.

Tarsus nearly half as long again as the middle toe and claw.

Range. Malay Peninsula, Sumatra, Borneo.

Key to the Species.

I. Plumage not uniform black.
- A. Chest and breast black ..... *erythrophthalmus* ♂, p. 283.
- B. Chest and breast black with white shaft-stripes ..... *pyronotus* ♂, p. 284.

II. Plumage uniform black
- C. Upper parts uniformly glossed with greenish blue ..... *erythrophthalmus* ♀, p. 283. / *pyronotus* ♀, p. 284.
- D. Feathers of the upper parts *edged* with shining bluish green, producing a scale-like appearance .. *inornatus* ♂†, p. 285.

1. Acomus erythrophthalmus.

Phasianus erythrophthalmus, *Raffl. Tr. Linn. Soc.* xiii. p. 321 (1822) [Sumatra].

Rufous-tailed Pheasant, *Lath. Gen. Hist.* viii. p. 204 (1823).

Houppifer diardii, *Guérin-Méneville, Icon. Règ. Anim., Ois.* p. 26, pl. 43. fig. 2 (1828–38) [Java].

Phasianus erythrophthalmus, *Gray, in Griff. ed. Cuv.* iii. p. 28 (1829).

Phasianus purpureus, *Gray, Ill. Ind. Zool.* i. pl. 42 (1830–32).

Alectrophasis erythrophthalmus, *Gray, List Gen. B.* p. 78 (1841); *id. List of B.* pt. iii. *Gall.* p. 26 (1844); *Hume, Str. F.* viii. p. 68 (1879) [Malacca]; *Ketham, Ibis*, 1881, p. 531 [Perak].

Alectrophasis purpureus, *Gray, List Gen. B.* p. 78 (1841).

Gallophasis erythrophthalmos, *Gray, Gen. B.* iii. p. 498 (1845).

Gallophasis purpureus, *Gray, Gen. B.* iii. p. 498 (1845).

Euplocomus erythrophthalmos, *Blyth. Cat. Mus. As. Soc.* p. 245 (1849).

Euplocamus erythrophthalmus, *Sclat. & Wolf, Zool. Sket.* 2. pl. 34 (1861); *Sclat. List of Phas.* p. 7, pl. 8 (1863).

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* The female of *A. inornatus* is not yet known. † See footnote page 285.

Euplocamus erythrophthalmos, *Gray, List Gallinæ Brit. Mus.* p. 35 (1867); *id. Hand-l. B.* ii. p. 259 (1870).
Euplocamus purpureus, *Gray, List Gallinæ Brit. Mus.* p. 36 (1867); *id. Hand-l. B.* ii. p. 259 (1870).
Euplocomus erythrophthalmus, *Elliot, Mon. Phas.* ii. pl. 28 (1872).

Adult male. Top of the head black; neck and chest black glossed with dark purplish blue; upper back and scapulars the same, wing-coverts and secondaries slightly glossed with steel-blue and all finely marked with irregular wavy white bars; lower back fiery bronze-gold, shading into fiery bronze-red on the rump; upper tail-coverts black glossed with steel-blue; primaries dark brown, slightly vermiculated with whitish buff; rest of the underparts black, slightly glossed on the sides, flanks, and under tail-coverts with purplish or steel-blue, the former are also vermiculated with white. Tail uniform pale rufous buff, blackish towards the base. Facial skin and wattles bright red; bill blackish; legs bluish grey. Total length 20 inches, wing 9·5, tail 6·4, tarsus 3.

An *immature male* has much less gloss on the plumage, the underparts are brownish black, and the outer tail-feathers are mottled all over with black.

Adult female. Plumage entirely black, glossed with purplish or steel-blue; soft parts like those of the male. Total length 18·5 inches, wing 8·4, tail 5·4, tarsus 2·8.

Hab. Southern part of the Malay Peninsula, and Sumatra. ?Java.

a. ♂ ad. st.	Indian Archipelago.	Capt. Sir E. Belcher [P.].
b. ♀ ad. st.	Indian Archipelago.	J. Nightingale, Esq. [P.].
c–e. ♂ ♀ ad. sk.	Keddah, Malay Peninsula (*Dr. Cantor*).	India Museum [P.].
f. ♂ ad. sk.	Penang (*Dr. Cantor*).	India Museum [P.].
g–k. ♂ ♀ ad. sk.	Province Wellesley (*Dr. Cantor*).	India Museum [P.].
l–p. ♂ ♀ ad. sk.	Malacca (July).	Hume Coll.
q, r. ♂ ♀ ad. sk.	Malacca (*Simson*).	Hume Coll.
s, t. ♂ ♀ ad. sk.	Malacca (*Dr. Maingay*).	Tweeddale Coll.
u. ♂ ad. sk.	Malacca.	A. R. Wallace, Esq. [C.].
v, w. ♂ ♀ ad. sk.	Malacca.	Capt. Stackhouse Pinwill [P.].
x, y. ♂ ♀ ad. sk.	Malacca.	W. Harvey, Esq. [P.].
z. ♀ ad. sk.	Malacca (*Cantor*).	India Museum [P.].
a'. ♂ ad. sk.	Singapore (Feb.).	Gould Coll.
b', c'. ♂ ad. et imm. sk.	Sumatra (*Sir T. Raffles*).	India Museum [P.]. (Types of the species.)
d', e'. Skeletons.		Zool. Soc. Coll.

Hybrid between Acomus erythrophthalmus *and* Gennæus muthura.

a. ♂ ad. st.	England.	Zool. Soc. Coll.

2. Acomus pyronotus.

Euplocomus erythrothalmus (*sic*), *Gray* (*nec Rafft.*), *Illust. Ind. Zool.* ii. pl. 38. fig. 1 (1834).

Alectrophasis pyronota, *Gray, List of B.* pt. iii. *Gall.* p. 26 (1844).
Gallophasis pyronotus, *Gray, Gen. B.* iii. p. 498 (1845).
Alectrophasis personatus, *Temm. MS., Bonap. C. R.* xlii. p. 879 (1856).
Euplocamus pyronotus, *Sclat. P. Z. S.* 1863, p. 120; *id. List of Phas.* p. 8 (1863); *Gray, List Gallinæ Brit. Mus.* p. 36 (1867); *Blyth, Ibis*, 1870, p. 174; *Elliot, P. Z. S.* 1871, p. 138.
Euplocomus pyronotus, *Gray, Hand-l. B.* ii. p. 259 (1870); *Elliot, Mon. Phas.* ii. pl. 29 (1872); *Salvad. Uec. Born.* p. 307 (1874); *Sharpe, Ibis*, 1877, p. 23[Bintulu]; *Blas. Verh. Ges. Wien*, xxxiii. p. 68 (1883) [Lihong Bahaja]; *Everett, List B. Born.* p. 199 (1889).
Acomus pyronotus, *Gray, Hand-l. B.* ii. p. 259 (1870).
Phasianus personatus, *Blyth, Ibis*, 1870, p. 174.
Euplocomus personatus, *Temm. MS., Elliot, Mon. Phas.* ii. text to pl. 29 (1872).

Adult male. Differs from the male of *A. erythrophthalmus* in having the neck and mantle grey finely mottled with black, each feather with a white shaft; the chest, breast, and sides of the belly all with narrow white shaft-stripes. Total length 20 inches, wing 9·3, tail 5·7, tarsus 3·3.

Adult female resembles the adult female of *A. erythrophthalmus*. Total length 18·5 inches, wing 8·4, tail 5, tarsus 3·15.

Hab. Sarawak, Borneo.

a, b. ♂ ♀ ad. sk.	Baram, Sarawak, June, Aug.	C. Hose, Esq. [C.].
c, d. ♂ ad. sk.	Sarawak.	Rajah Brooke [P.].
e, f. ♂ ♀ ad. st.	Sarawak.	Rajah Brooke [P.].
g. ♂ ad. sk.	Sarawak.	A. R. Wallace, Esq. [C.].
h. ♂ ad. sk.	[China.]	J. R. Reeves, Esq. [P.]. (Type of the species.)

3. Acomus inornatus.

Acomus inornatus, *Salvad. Ann. Mus. Civ. Genov.* xiv. p. 250 (1879); *id. P. Z. S.* 1879, p. 651, pl. xlviii. [Mount Singalan, West Coast of Sumatra]; *Büttikofer, N. Leyd. Mus.* ix. p. 77 (1887) [Padang, W. Sumatra].

Adult male (type)*. Resembles the females of both *A. erythrophthalmus* and *A. pyronotus* in general appearance, but may be at once recognized by its larger size, deep black colour all over, even on the head, and by having all the feathers of the upper parts, back, upper tail-coverts and wing-coverts, and also the feathers of the neck and breast, distinctly and sharply edged with shining dark bluish green, turning to blue near the hind neck, so that all these parts appear beautifully scaled; this scale-like appearance is completely

* A second male specimen obtained by Klaesi in the Highlands of Padang, W. Sumatra, agrees exactly with Salvadori's type, so there can be now no doubt that in this interesting and probably ancestral form the male is really black and closely resembles the females of the two other known species. Beccari writes on the label of the type specimen "The female is reddish brown. I am told that it has no spurs." No specimen has yet been obtained, but I much doubt the female of *A. inornatus* being reddish brown; probably the bird referred to was the female of *L. rufa*.

wanting in the females of the above mentioned species. Lastly the hidden parts of the feathers do not incline to brown, but are only greyish towards the base. Total length 18·5 inches, wing 8·9, tail 6·5, tarsus 2·8.

Hab. Mount Singalan, and Highlands of Padang, West Sumatra.

29. LOPHURA.

	Type.
Lophura, *Fleming, Philos. Zool.* ii. p. 230 (1822)	L. ignita.
Euplocomus, *Temm.* (*nec Latr., Lep.* 1809) *Pl. Col.* v. text to *Lophophorus*, p. 3 (1830)	L. ignita.
Macartneya, *Less. Traité d'Orn.* p. 492 (1831)	L. ignita.
Spicifer, *Kaup, Das Thierreich*, ii. Theil i. p. 78 (1836).....	L. ignita.
Lophalector, *Cab. in Ersch u. Grub. Encycl.* sec. 3, xxii. p. 146 (1846)	L. ignita.
Lophora, *Gray, Hand-l. B.* ii. p. 259, no. 2378 (1870).....	L. ignita.
Diardigallus, *Bonap. C. R.* xliii. p. 414 (1856)	L. diardi.

Tail rather long, composed of 16 feathers, laterally compressed as in the genus *Gallus*, the 3rd pair rather longer than the central and 2nd pairs and very much longer than the outer pair.

1st primary shorter than 2nd, which is about equal to the 10th; 5th and 6th slightly longest.

Head with a full crest composed of more or less long bare shafts supporting a bunch of plumes at the extremity.

A large naked patch on each side of the head.

Male only with a long stout pair of spurs.

Tarsus nearly twice as long as the middle toe and claw.

Range. Shan States, Siam, Cambodia, Cochin China, S. Tenasserim, Malay Peninsula, Sumatra, Borneo.

Key to the Species.

A. Mantle not reddish brown or chestnut. (*Males.*)
  a. Chest black glossed with purplish blue.
    a'. Breast black; middle pair of tail-feathers white ..... *rufa*, p. 286.
    b'. Breast fiery bronze-gold; middle pair of tail-feathers uniform dark buff ..... *ignita*, p. 288.
  b. Chest dark grey, very finely vermiculated with black: breast and middle pair of tail-feathers black glossed with purplish green ..... *diardi*, p. 290.
B. Mantle reddish brown or chestnut. (*Females.*)
  c. Wing-coverts chestnut, finely vermiculated with black.
    c'. Outer tail-feathers chestnut ..... *rufa*, p. 286.
    d'. Outer tail-feathers black ..... *ignita*, p. 288.
  d. Wing-coverts black with wide irregular buff bars mixed with black..... *diardi*, p. 290.

1. Lophura rufa.

Gallus macartnyi, *Steph.* (*nec Temm.*) *in Shaw's Gen. Zool.* xi. p. 218 (1819) [part].

Phasianus ignitus, *Raffl.* (*nec Shaw & Nodder*) *Tr. Linn. Soc.* xiii. p. 320 (1822) [Sumatra]; *Vieill. Tabl. Encycl. Méth.* i. p. 363, pl. 237. fig. 2 (1823); *Daniell, P. Z. S.* 1832, p. 24.

Phasianus rufus, *Raffles, Tr. Linn. Soc.* xiii. p. 321 (1822) [Sumatra]; *Gray, in Griff. ed. Cuv.* iii. p. 28 (1829).
Sumatran Pheasant, *Lath. Gen. Hist.* viii. p. 204 (1823).
Gallus ignitus, *Vieill. (nec Shaw & Nodd.) Gal. Ois.* ii. p. 29, pl. 207 (1825).
Phasianus castaneus, *Gray, in Griff. ed. Cuv.* iii. p. 28 (1829).
Gallus macartneyi, *Schinz, Nat. Abbild. Vög.* p. 248, pl. 93 (1833); *Schinz, Nat. Vög.* p. 147, pl. 70 (1853).
Euplocomus ignitus, *Jard. Nat. Lib., Orn.* iv. p. 214, pls. xix., xx. (1834); *Gray, Hand-l. B.* ii. p. 259 (1870).
Euplocamus ignitus, *Gray, Ill. Ind. Zool.* ii. pl. 39 (1834); *Blyth, Cat. Mus. As. Soc.* p. 243 (1849); *Elliot, Mon. Phas.* ii. pl. 26 (1872) [syn. part]; *Blyth & Walden, Cat. Mamm. & B. Burma,* p. 149 (1875); *Elliot, Ibis,* 1878, p. 124.
Euplocamus vieilloti, *Gray, List Gen. B.* p. 77 (1841); *Gould, B. As.* vii. pl. 15 (1852); *Sclat. List. of Phas.* p. 6, pl. 7 (1863) [Tenasserim, Malay Peninsula, Sumatra]; *Gray, List Gallinæ Brit. Mus.* p. 35 (1867); *Sclat. & Wolf, Zool. Sket.* 2. pl. 36 (1867); *Hume, Str. F.* ii. p. 481 (1874) [Tenasserim], iii. p. 324 (1875); *Sclat. P. Z. S.* 1875, p. 380; *Hume, Str. F.* v. p. 119 (1877); *Hume & Marsh. Game B. Ind.* i. p. 213, pl. (1878); *Hume & Davison, Str. F.* vi. p. 438 (1878) [Pakchan]; *Elliot, Ibis,* 1878, p. 413; *Kelham, Ibis,* 1881, p. 532 [Perak]; *Oates, B. Burmah,* ii. p. 320 (1883) [S. Tenasserim].
Euplocomus vieilloti, *Gray, List of B.* pt. iii. *Gall.* p. 26 (1844); *id. Hand-l. B.* ii. p. 259 (1870); *v. Pelz. Verh. Ges. Wien,* xxix. p. 532 (1880); *Müll. J. f. O.* 1885, p. 160 [Salanga Is.]; *Vorderm. Nat. Tijdschr. Ned. Ind.* xlix. Afl. 2. p. 101 (1889).
Gallophasis vieilloti, *Gray, Gen. B.* iii. p. 498 (1845).
Euplocamus sumatranus, *Dubois, Bull. Ac. Belg.* (2) xlvii. p. 825 (1879) [Sumatra]: *v. Pelz. Verh. Ges. Wien,* xxix. p. 531 (1880).
Euplocomus sumatranus, *Vorderm. Nat. Tijdschr. Ned. Ind.* xlix. Afl. 2. p. 98 (1889).

Adult male. Differs from the male of *L. ignita* in having the lower breast and rest of the underparts black, most of the feathers being edged with a steel-blue gloss; the feathers of the sides and flanks with white shaft-stripes*; and the central tail-feathers white. Bill white or horny white; facial skin and wattles bright smalt-blue; legs and feet vermilion-red, spurs whitish. Total length 27 inches, wing 11·6, tail 10·2, tarsus 4·3.

An *immature male*, in which some of the rump-feathers and longer upper tail-coverts are black mottled with rufous like those of the female, has the wing-coverts, chest, and underparts dull black, with scarcely a trace of steel-blue gloss except at the ends of some of the side feathers, which have very narrow rufous-chestnut shaft-stripes; the white central tail-feathers with narrow black shaft-stripes on their basal two-thirds; and a pair of short spurs 0·4 inch in length.

* In most Sumatran specimens (*Euplocamus sumatranus*, Dubois) the majority of the shaft-stripes are rufous buff or chestnut; but as this difference is also found, though in a slightly less marked degree, in some of the specimens from Bankasoon, Tenasserim, and is not constant even in Sumatran examples, it cannot be regarded as having any specific importance. In Tenasserim specimens it is certainly a sign of immature plumage; in Sumatran birds it appears to be more or less retained in apparently fully adult examples with well-developed spurs.

Adult female. Resembles the adult female of *L. ignita*, but is easily distinguished by having the ground-colour of the lower back, rump, upper tail-coverts, wing-coverts, and scapulars paler than that of the neck * and mantle; the outer webs of the secondaries chestnut, mottled with black, and the tail-feathers dark chestnut, the middle pairs being mottled with black; soft parts as in the male, but not so bright. Total length 24 inches, wing 10, tail 7·6, tarsus 3·6.

In *younger specimens* the black vermiculations, especially on the greater wing-coverts and secondaries, are much stronger.

Hab. Siam, Malay Peninsula from South Tenasserim southwards, and Sumatra.

a. ♂ imm. sk.	Siam.	India Museum [P.].
b. ♂ ad. sk.	Tenasserim.	J. C. D. Packman, Esq. [P.].
c–*w*. ♂ ♀ ad. et imm. sk.	Bankasoon, Feb.–May, and December (*W. Davison*).	Hume Coll.
x, *y*. ♂ ♀ ad. sk.	Malawoon, Jan., Feb.	E. W. Oates, Esq. [C.].
z. ♀ ad. sk.	Penang (*Dr. Cantor*).	India Museum [P.].
a'–*c'*. ♂ ♀ ad. et imm. sk.	Prov. Wellesley (*Dr. Cantor*).	India Museum [P.].
d'. ♂ ad. st.	Malacca.	Cuming Coll. (Type of *E. vieilloti*, Gray.)
e', *f'*. ♂ ♀ ad. sk.	Malacca.	Hume Coll.
g'. ♀ imm. sk.	Malacca (*Dr. Cantor*).	India Museum [P.].
h', *i'*. ♂ ♀ ad. sk.	Malacca.	Capt. Stackhouse Pinwill [P.].
k', *l'*. ♂ ♀ ad. sk.	Malacca (*Dr. Maingay*).	Tweeddale Coll.
m', *n'*. ♂ ad. et ♀ imm. sk.	Malacca.	W. Harvey, Esq. [P.].
o', *p'*. ♂ ♀ ad. sk.	Malacca.	A. R. Wallace, Esq. [C.].
q', *r'*. ♂ ♀ ad. sk.	Sumatra (*Sir T. Raffles*).	India Museum [P.].
s'–*u'*. ♂ ad. et ♀ juv. sk.	Sumatra, Oct. (*Carl Bock*).	Tweeddale Coll.
v'. ♀ ad. sk.	[Borneo.]	Zool. Society's Coll.
w'. Skeleton.		

2. Lophura ignita.

Phasianus ignitus, *Shaw & Nodder, Nat. Misc.* ix. pl. 321; *Gray, in Griff. ed. Cuv.* iii. p. 30 (1829).

Fire-backed Pheasant, *Lath. Gen. Syn. Suppl.* ii. p. 274 (1801).

Gallus macartneyi, *Temm. Pig. et Gall.* ii. p. 273 (1813), iii. p. 663 (1815).

Gallus macartnyi, *Steph. in Shaw's Gen. Zool.* xi. p. 218 (1819) [part.].

Houppifer ignitus, *Guérin-Méneville, Icon. Règ. Anim., Ois.* p. 26, pl. 43. fig. 3 (1829–38).

Euplocomus macartneyi, *Temm. Pl. Col.* v. *in text of genus* Lophophorus, p. 3 (1830).

* In some specimens the feathers of the back of the neck and upper parts of the mantle are edged on the sides with white like those of the sides and front of the neck; this peculiarity is also incipiently represented in a female of *L. ignita*.

Euplocomus ignitus, *Gray, List of B.* pt. iii. p. 26 (1844); *Müller, Verhandl. Land- en Volkenk.* p. 376 (1839–44) [Banjarmasin]; *Low, Sarawak*, p. 411 (1848); *Sharpe, Ibis*, 1879, p. 270 [Lawas and Mengalong Rivers); *v. Pelz. Verh. Ges. Wien*, xxix. p. 531 (1880); *Sharpe, P. Z. S.* 1881, p. 800 [Sandakan]; *Nichols. Ibis*, 1883, p. 90 [Silam]; *Elliot, Auk*, viii. p. 15 (1891) [Kinabatangan R., N.E. Borneo].

Gallophasis ignitus, *Gray, Gen. B.* iii. p. 498 (1845).

Euplocamus nobilis, *Sclat. P. Z. S.* 1863, p. 118, pl. xvi.; *id. List of Phas.* p. 7 (1863); *Gray, List Gallinæ Brit. Mus.* p. 35 (1867); *Sclat. P. Z. S.* 1868, p. 261; *Gray, Hand-l. B.* ii. p. 259 (1870); *Elliot, P. Z. S.* 1871, p. 138; *Walden, Ibis*, 1872, p. 382; *Elliot, Mon. Phas.* ii. pl. 27 (1872); *Salvad. Uce. Borneo*, p. 306 (1874); *Elliot, Ibis*, 1878, p. 414; *Sharpe, Ibis*, 1879, p. 234 [Sarawak]; *Sclat. Ibis*, 1880, p. 371; *Guillem. P. Z. S.* 1885, p. 416 [Silam, Sandakan]; *Everett, List B. Born.* p. 199 (1889) [N. & S. Borneo].

Adult male. Short feathers on the head, chin, and throat black; crest, neck, mantle, chest, upper breast, scapulars, and upper tail-coverts purplish blue; wing-coverts tipped with steel-blue; lower back and rump fiery bronze-red; lower breast and upper belly fiery bronze-gold; rest of underparts black, some of the feathers tipped with steel-blue. Quills and the fifth to the eighth pairs of tail-feathers black, fourth pair black, tipped with buff, third pair mostly buff, partially black on the outer web, and the two centre pairs uniform dark buff. Bill horny white, large smalt-blue wattles surrounding the eye and covering the sides of the head; legs and feet red. Total length 23 inches, wing 10·5, tail 8·4, tarsus 4·4.

A *quite young male* has the plumage mostly like that of the young female, but the back of the head, middle of the nape, and the centres of the upper feathers are mostly black, slightly glossed on the margin with steel-blue.

Adult female. Head, crest, mantle, and wing-coverts uniform

LOPHURA, sp.

Fire-backed Pheasant, *Lath. Gen. Hist.* viii. p. 184 (1823).

Macartneya macartneyi, *Less. Traité d'Orn.* p. 493 (1831).

Euplocamus ignitus, *Sclat.* (*nec Shaw & Nodd.*), *P. Z. S.* 1863, p. 118; *Sclat. P. Z. S.* 1875, p. 380; *Hume, Str. F.* v. p. 119 (1877); *Elliot, Ibis*, 1878, pp. 124, 411.

Adult male. Resembles the male of *L. ignita*, but differs in having the feathers down the centre of the lower breast and belly entirely black, those on the sides margined or largely mixed with black, only the central part in some being rufous chestnut, and the central tail-feathers are white.

This specimen was sent by Mr. J. R. Reeves from China, and has evidently been in captivity, for some of the quills of both wings have been cut. Elliot is of opinion that this specimen is a hybrid between *L. ignita*, Shaw & Nodd., and *L. rufa*, Gray; but I can see no reason for this conjecture, and were it not for the fact that this bird was not shot in a wild state I should have no hesitation in describing it as a distinct species.

Since writing the above I have seen a second almost similar living specimen in the collection of Mr. E. W. Marshall at Marlow, but was unable to discover whence it had been obtained.

a. ♂ ad. sk. China. J. R. Reeves, Esq. [P.].

chestnut, gradually shading into darker on the lower back, rump, upper tail-coverts, and greater wing-coverts, all of which are finely vermiculated with black. Quills brownish black, the primaries washed and the secondaries mottled with rufous on the outer web; chin and throat white; neck and chest chestnut, margined with white on the sides; breast and sides of the belly black, sometimes mottled with chestnut, and edged all round with white; rest of underparts white, somewhat mottled with black. Tail black, the two centre pairs of feathers sometimes mottled with chestnut. The third pair are the longest, being $\frac{2}{3}$ of an inch longer than the central pair and half as long again as the outer (8th) pair. Soft parts as in the male. Total length 22 inches, wing 9·8, tail 7·6, tarsus 3·6.

A *quite young female* has the plumage like the adult, but the wing-coverts and scapulars have subterminal bars and blotches of black, and the chest-feathers are mostly black.

Hab. Borneo.

a. ♀ ad. sk.	Elopura, N. Borneo, April (*W. B. Pryer*).	Tweeddale Coll.
b–e. ♂ ♀ ad. st. et sk.	Sarawak, Borneo.	Rajah Brooke [P.]. (Types of the species.)
f, g. ♂ ♀ ad. sk.	Sarawak.	Sir H. Low [C.]
h. ♂ ad. sk.	Sarawak.	A. R. Wallace, Esq. [C.].
i. ♀ ad. sk.	Sarawak (*A. H. Everett*).	Tweeddale Coll.
k, l. ♀ ad. et juv. sk.	Mt. Dulit, Sarawak, 1000 feet.	C. Hose, Esq. [C.].
m–t. ♂ ♀ ad. et juv. sk.	Baram, Sarawak, April to July.	A. H. Everett & C. Hose, Esqrs. [C.].
u–w. Skeletons.		Zool. Soc. Coll.

3. Lophura diardi.

Euplocomus diardi, *Temm. MS., Bonap. C. R.* xliii. p. 415 (1856); *Gray, Hand-l. B.* ii. p. 260 (1870).

Diardigallus prælatus, *Bonap. C. R.* xliii. p. 415 (1856); *Gould, B. Asia*, vii. pl. 21 [male only] (1860).

Gallus diardi, *Temm. MS., Schl. Handl. d. Dierk.* i. p. 379, *Atl. Aves*, pl. v. fig. 55 (1857).

Diardigallus fasciolatus, *Blyth, J. As. Soc. B.* xxvii. p. 280 (1858).

Diardigallus crawfurdi, *Schomb. P. Z. S.* 1862, p. 250.

Euplocamus crawfurdi, *Sclat. List of Phas.* p. 6 (1863).

Euplocamus prælatus, *Sclat. List of Phas.* p. 6, pl. 6 (1863) [Siam, Shan States]; *Schomb. Ibis*, 1864, p. 259 [E. Lao Country]; *Sclat. & Wolf, Zool. Sket.* 2. pl. 35 (1867); *Gray, List Gallinæ Brit. Mus.* p. 34 (1867); *Elliot, Mon. Phas.* ii. pl. 24 (1872).

Adult male. Feathered parts of the head, chin and throat black; crest black, slightly glossed with steel-blue; neck, mantle, chest, and upper breast very finely vermiculated with grey and black; wing-coverts, scapulars, and secondaries black, finely vermiculated with white; the lesser and median wing-coverts and the scapulars with a black subterminal band, narrowly edged with white; lower back buff, glossed with gold; rump and shorter upper tail-coverts black, glossed with purplish blue and widely edged with dark

crimson with bronze-red reflections; primaries brownish black, faintly mottled with white; rest of the underparts, longer upper tail-coverts, and tail black, slightly glossed with steel-blue or purple; the first three pairs of tail-feathers are unusually long and pointed, the third pair being considerably longer than first. Facial skin and wattles red. Bill and spurs white; legs and feet scarlet. Total length 24 inches, wing 9·8, tail 13, tarsus 3·4.

A *quite young male* differs from the adult in having no crest; the neck and back mixed with rufous-chestnut feathers vermiculated with black like those of the adult female; the wing-coverts and secondaries interspersed with blackish-brown feathers, irregularly barred and mottled with buff, and the tail-feathers chestnut, marked and barred with black.

Adult female. Top of the head and neck brown, shading into whitish on the chin and throat; mantle, chest, breast, and sides of the belly reddish chestnut, the feathers of the two latter margined all round with white; lower back black, closely mottled with rufous buff; rump and upper tail-coverts mottled with buff; wing-coverts, scapulars, and secondaries black with wide-set buff bands, mottled with black; primaries brownish black, mottled with buff; rest of the underparts brownish black, edged with white; under tail-coverts chestnut. Two middle pairs of tail-feathers like the outer secondaries, five outer pairs dark chestnut, third pair intermediate. Total length 21 inches, wing 8·8, tail 8·3, tarsus 2·9.

Hab. Shan States, Siam, Cambodia, and Cochin China.

a, b. ♂ ♀ ad. sk.	Siam.	Sir R. Schomburgk [P.].
c–e. ♂ ♀ ad. st. et sk.	Siam.	Zoological Society's Coll.
f–i. ♂ juv. et ♀ ad. sk.	Cambodia, July.	M. E. Pierre [P.].

Hybrid between Lophura diardi *and* Gennæus linoatus.

a. ♀ ad. st.	England.	Zool. Soc. Coll.

30. LOBIOPHASIS.

Type.

Lobiophasis, *Sharpe, Ann. Mag. N. H.* (4) xiv. p. 373(1874). L. bulweri.

Tail composed of 32 feathers in the male (28 in the female), compressed elongate, pointed, the middle pairs of feathers much curved and more than twice as long as the outer pairs, which have little or no outer web. All the feathers have the shaft produced beyond the web and in the outer pairs it terminates in a sharp point.

1st primary is much shorter than the 2nd, which is about equal to the 10th; the 5th is if anything slightly the longest.

The male has the head almost entirely naked, only a few feathers down the middle of the crown. Three pairs of elongate wattles—a large pair, one on each side of the occiput, a very large one on each side of the throat, and a small pair on the lores on each side of the base of the culmen. In the female only the sides of the head are naked; there is a rudimentary pair of wattles, one on each side of the throat.

The tarsus is armed with a short stout spur, and is much longer than the middle toe and claw.

Range. Borneo.

1. Lobiophasis bulweri.

Lobiophasis bulweri, *Sharpe*, *Ann. Mag. N. H.* (4) xiv. p. 373 (1874) [Lawas Mts., Sarawak]; *Gould*, *B. Asia*, vii. pl. 13 (1875); *Selat. P. Z. S.* 1876, p. 465, pl. xliv.; *Sharpe*, *Ibis*, 1879, p. 267; *Treacher*, *Ibis*, 1888 p. 413 [Kinabataugan]; *Everett*, *List B. Born.* p. 198 (1889).

Lobiophasis castaneicaudatus, *Sharpe*, *P. Z. S.* 1877, p. 94 [Lawas R.]; *Gould*, *B. Asia*, vii. pl. 12 (1877); *Sharpe*, *Ibis*, 1879, p. 267.

Adult male. Neck and chest dark crimson; back, rump, and lesser and median wing-coverts black, more or less tinged with purple; all the feathers are margined with steel-blue at the extremity, which is slightly curled. Primary-quills and their coverts dark brown; secondaries and secondary-coverts brownish black; breast, sides, and flanks like the back, but the steel-blue margins are narrower; belly, thighs, and very short under tail-coverts black; upper tail-coverts and tail pure white. Bill horn-colour; naked skin of face and wattles blue; legs red. Total length 35 inches, wing 10·3, tail 18, tarsus 3·5.

Immature males differ from the adults in having the top of the head thickly covered with purplish-black feathers mixed with rufous; the chin and throat thinly covered with black feathers; the wattles rudimentary; the dark crimson on the neck and throat much brighter; and the tail-feathers and the upper tail-coverts dark chestnut and shaped more like those of the female.

Adult female. Upper parts finely mottled with brownish buff and black, inclining to rufous on the wing-coverts; the outer webs of the primaries mostly rufous, indistinctly mottled with black, the inner webs uniform dark brown; secondaries black, mottled on both webs with rufous. Underparts rufous, finely mottled with black. Upper tail-coverts and tail chestnut, with some small black vermiculations. Total length 20 inches, wing 9·4, tail 6·4, tarsus 3·7.

A young female differs from the adult in having most of the wing-coverts and scapulars tipped with rust-red and obliquely barred with black on one or both webs; the outer webs of the primaries blackish, only slightly vermiculated with rufous buff towards the margin; and the upper tail-coverts finely mottled with brownish buff and black.

Hab. Borneo.

a. ♂ ad. sk.	Mountains of Lawas R., Sarawak.	Governor Bulwer [P.]. (Type of the species.)
b, c. ♂ ad. st. et ♀ ad. sk.	Lawas River.	Governor Ussher [C.].
d, e. ♂ ♀ imm. sk.	Lawas River.	Governor Ussher [C.]. (Types of *L. castaneicaudatus*, Sharpe.)
f. ♂ imm. sk.	Lawas River.	W. Pretyman, Esq. [P.].
g, h. ♂ ad. sk.	Sarawak (*A. H. Everett*).	Tweeddale Coll.
i. ♂ juv. sk.	Mt. Dulit, Sarawak, June.	C. Hose, Esq. [C.].

31. CROSSOPTILON.

Type.

Crossoptilon, *Hodgs. J. As. Soc. Beng.* vii. p. 864 (1838) ..... C. tibetanum.

Tail composed of 20 to 24 feathers, large, full, and rounded; the middle pair of feathers twice as long as the outer pair; the extremities of the middle pairs much curved, and the webs very long and free.

1st primary considerably shorter than the 2nd, which is equal to the 9th or 10th; 5th or 6th slightly the longest.

Top of the head covered with short, soft, curly feathers; ear-coverts produced into long white tufts on each side of the head; rest of the plumage of the body long and hairy.

Sides of the face naked, covered with papillæ.

Sexes similar in plumage, but in the male the tarsi are armed with a pair of short stout spurs.

Tarsus considerably longer than the middle toe and claw.

Range. Higher ranges of Central and Eastern Asia.

Key to the Species.

A. Mantle white.
  a. Basal part of the outer tail-feathers dark .... *tibetanum*, p. 293.
  b. Basal part of the outer tail-feathers white.... *leucurum*, p. 294.
B. Mantle brownish black; basal part of the outer tail-feathers dirty white..... *mantchuricum*, [p. 294.
C. Mantle slate-blue.
  c. Basal part of the outer tail-feathers white; an indistinct white band across the head between the ear-coverts ..... *auritum*, p. 295.
  d. Basal part of the outer tail-feathers brownish black glossed with blue; a wide well-defined white band across the back of the head between the ear-coverts..... *harmani*, p. 296.

1. Crossoptilon tibetanum.

Phasianus (Crossoptilon) tibetanus, *Hodgs. J. As. Soc. Beng.* vii. p. 864, pl. 46 (1838); *id. Ind. Rev.* iii. p. 593, pl. (1839).

Crossoptilon tibetanum, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844); *Sclat. List of Phas.* p. 6, pl. 4 (1863); *Gray, List Gallinæ Brit. Mus.* p. 31 (1867); *David, N. Arch. Mus. Bull.* vii. p. 11 (1871) [Moupin]; *Elliot, Mon. Phas.* i. pl. 14 (1872); *David & Oustal. Ois. Chine*, p. 407, pl. 107 (1877) [W. Sze-chuen]; *Hume, Str. F.* vii. p. 426 (1878); *Scully, Str. F.* viii. p. 343 (1879); *Oustal. Ann. Sci. Nat.* (7) xii. p. 315 (1892) [part.].

Crossoptilon auritum, *Gray, Gen. B.* iii. p. 495, pl. cxxv. (1845); *id. Cat. Hodgs.* ed. 1, p. 124 (1846).

Crossoptilon drouynii, *Verreaux, N. Arch. Mus. Bull.* iv. p. 85, pl. iii. (1868) [Moupin]; *Swinh. P. Z. S.* 1871, p. 399; *Elliot, Mon. Phas.* i. p. xviii, pl. 15 (1872).

Crossoptilon tibetanus, *Gray, Hand-l. B.* ii. p. 259 (1870).

Crossoptilum tibetanum, *Hume & Marsh. Game-B. Ind.* i. p. 115, pl. (1878); *Seebohm. Ibis*, 1891, p. 378 [W. Sze-chuen].

Adult male. Top of the head covered with short, soft, curly black

feathers; the ear-coverts, as in all the members of this genus, are greatly produced and form long white tufts on each side of the head; the whole of the plumage above and below is pure white, shading into grey on the longer wing- and upper tail-coverts; primary-quills dark brown, secondaries blacker and somewhat glossed with purple. Tail with 20 feathers, purplish bronze towards the base, shading into dark greenish blue and deep purple towards the extremity*. Naked parts on the sides of the head scarlet; bill reddish horn; legs red. Total length 36 inches, wing 12·4, tail 18·6, tarsus 3·9.

Adult female. Is distinguished from the male by the absence of spurs; the plumage is perfectly similar.

Hab. Mountains of Western China and Eastern Thibet.

a. ♂ ad. sk.	Thibet.	B. H. Hodgson, Esq. [P.]. (Type of the species.)
b. ♂ ad. sk. (imperfect).	Thibet.	B. H. Hodgson, Esq. [P.].

2. Crossoptilon leucurum.

Crossoptilon tibetanum, *Oustal. Ann. Sci. Nat.* (7) xii. p. 315 (1892) [part.].

Crossoptilon leucurum, *Seebohm, Bull. Brit. Orn. Club,* no. iv. p. xvii (Dec. 21st, 1892); *id. Ibis,* 1893, p. 250 [Between the Sok Pass and Chiamdo, E. Tibet].

Adult male and female. Like *C. tibetanum*, but with the greater part of the tail-feathers white. In the male all the tail-feathers are pure white, with black extremities glossed with purplish blue. In the female the white on the tail-feathers is less extensive, and the middle and outer pairs have the inner webs grey, while all are tipped and margined with dark grey.

Hab. Eastern Thibet, between the Sok Pass and Chiamdo and Lhassa.

3. Crossoptilon mantchuricum.

Crossoptilon tibetanum, *Lamprey (nec Hodgs.), P. Z. S.* 1862, p. 221.

Crossoptilon auritum *sive* mantchuricum, *Swinh. P. Z. S.* 1862, p. 286, & 1863, p. 306 [Mantchouria].

Crossoptilon auritum, *Sclat. List of Phas.* p. 6, pl. 5 (1863) [Mantchouria]; *Milne-Edw. N. Arch. Mus. Bull.* i. p. 12, pl. i. figs. 1 & 2 (1865) [E. of Pekin]; *Sclat. P. Z. S.* 1866, p. 418; *Saurin, P. Z. S.* 1866, p. 437 [Mts. N.W. of Pekin]; *David, N. Arch. Mus. Bull.* iii. p. 37 (1867) [San-Yù]; *Bartl. P. Z. S.* 1868, p. 115; *Gould, B. Asia,* vii. pl. 22 (1870).

Crossoptilon mantchuricum, *Newton, Ibis,* 1865, p. 361 [Pekin]; *Gray, List Gallinæ Brit. Mus.* p. 31 (1867); *id. Hand-l. B.* ii. p. 259 (1870); *David, N. Arch. Mus. Bull.* vii. p. 11 (1871) [Pekin]; *Swinh. P. Z. S.* 1871, p. 399; *Sclat. P. Z. S.* 1871, p. 495; *Elliot,*

* In the type specimen the six outer pairs of tail-feathers have an oblong white spot or line on their outer web nearly parallel to the shaft, but these markings are not equally developed on the two sides. In three specimens of *C. tibetanum* living in the Zoological Society's Gardens, as well as in a large number of skins I have examined, the white spots on the outer tail-feathers are entirely absent, and in one the primaries are greyish brown. There can be no doubt that *C. drouyni* is synonymous with *C. tibetanum*.

Mon. Phas. i. pl. 16 (1872); *David & Oustal. Ois. Chine*, p. 405, pl. 106 (1877) [Mts. of Pechi-li]; *Sclat. P. Z. S.* 1879, p. 118, pl. viii. fig. 5.

Adult male. Top of the head covered with short black curly feathers; back of the head and neck black, slightly glossed and shading gradually into brown on the lower parts of the mantle and wings; the secondaries are slightly glossed with purple; lower back, rump, and upper tail-coverts dirty white; chin, throat, and elongate ear-tufts white; an indistinct white band separates the short feathers of the top from those covering the back of the head; chest dark blackish brown, gradually becoming lighter on the underparts; vent and under tail-coverts brownish white. Tail with 22 feathers; the basal part dirty white, and the extremities brownish black glossed with rich purplish blue; the lateral webs of the central pairs are very long and free, and the extremities are much curved. Naked sides of the face scarlet; bill light reddish horn-colour; legs red. Total length about 41 inches, wing 12·7, tail 22·6, tarsus 4·1.

Adult female. Resembles the male, but has no spurs.

Hab. Mountains of Mantchouria and Pechi-li.

a. ♂ ad. sk.	N.W. China.	Gould Coll.
b–d. ♂ ♀ ad. st. et ♀ ad. sk.	Mountains N.W. of Pekin.	Hon. Sir F. W. A. Bruce, K.C.B. [P.].
e, f. Pull. st.	England.	Zool. Soc. Coll.

4. Crossoptilon auritum.

Phasianus auritus, *Pall. Zoogr. Rosso-Asiat.* ii. p. 86 (1811); *Gray, List Gallinæ Brit. Mus.* p. 31 (1867); *Sclat. Ibis*, 1874, p. 170.

Crossoptilon auritum, *Gray, Hand-l. B.* ii. p. 259 (1870); *Swinh. P. Z. S.* 1871, p. 399; *Sclat. P. Z. S.* 1871, p. 495; *Elliot, Mon. Phas.* i. pl. 17 (1872); *Prjev. Mongolia*, ii. p. 121 (1876); *id. in Rowl. Orn. Misc.* ii. p. 420 (1877) [Kansu, Ala-shan Mts.]; *David & Oustal. Ois. Chine*, p. 406, pl. 108 (1877) [N.W. Sze-chuen, E. Koko-nor]; *Prjev. Reisen in Tibet*, p. 204 (1884); *Pleske, Bull. Acad. St. Pétersb.* xiii. p. 297 (1892) [North Nan-Shan].

Crossoptilon cærulescens, *David, MS.*; *Milne-Edw. C. R.* lxx. p. 538 (1870) [Sze-chuen]; *id. Ann. Mag. N. H.* (4) v. p. 308 (1870); *David, N. Arch. Mus. Bull.* vii. p. 11 (1871) [Koko-nor].

Adult male. Top of the head covered with short, soft, velvety black feathers; lores, chin, throat, and elongate ear-patches white; rest of the upper and under parts slate-grey; an indistinct white band divides the black of the top of the head from the grey of the occiput; primaries brown; secondaries dark brown, slightly glossed with purple. Tail with 24 feathers; the two middle pairs grey, shading into black glossed with purple at the extremity, and with very long, curved, free webs; the six outer pairs have the basal three-quarters white and the extremity black glossed with purple; the remaining pairs have the basal part black, the sixth pair being white on each side of the shaft. Bill reddish horn; naked sides of face scarlet; legs red. Total length 40 inches, wing 12·4, tail 21, tarsus 4.

Adult female. Resembles the male, but has no spurs.

Hab. Mountains of Koko-nor, Kansu, and North-west Szechuen.

a, b. ♂ ♀ ad. sk.	Kansu, Dec.	M. Berezowsky [C.].
c. ♂ ad. sk.	Kansu, Feb. (*Prjevalski*).	St. Petersburg Museum [E.].
d. ♂ ad. sk.	Baga-gorgi, Chuan-che, April (*Prjevalski*).	St. Petersburg Museum [E.].
e. ♂ juv. sk.	Babo-cho, China, Aug. (*Grum-Grzimailo*).	St. Petersburg Museum [E.].
f. Skeleton.		

5. Crossoptilon harmani.

Crossoptilon harmani, *Elwes, Ibis*, 1881, p. 399, pl. xiii. [E. Thibet].

Adult male. Resembles *C. auritum* in general plumage and appearance, but may be at once distinguished by having a wide and well-marked white band across the back of the head between the ear-coverts and no white on the basal part of the outer tail-feathers; moreover the white of the throat extends further down towards the chest, and the plumage of the head and neck appears to be somewhat darker. It is impossible to say certainly how many tail-feathers there may have been originally, as the unique type specimen is in very bad condition and the tail-feathers are all loose. Capt. Elwes, in the original description, gives the number as 20, but the plate represents 22. There are now 19 to be found, one on the left side being absent; but it appears to me that the two central pairs are wanting, and that the full number is 24, as in *C. auritum*.

Hab. Thibet, 150 miles east of Lhassa.

a. ♂ ad. sk.	150 miles east of Lhassa, 6000 ft.	H. J. Elwes, Esq. [P.]. (Type of the species.)

32. GENNÆUS.

	Type.
Gennæus, *Wagl. Isis*, 1832, p. 1228	G. nycthemerus.
Nycthemerus, *Swains. Class. B.* ii. p. 341 (1837)..	G. nycthemerus.
Alectrophasis, *Gray, List Gen. B.* ed. 2, p. 78 (1841).	G. cuvieri.
Grammatoptilus, *Reichenb. Nat. Syst. Vög.* p. xxx (1852).....	G. lineatus.
Hierophasis, *Elliot, Mon. Phas.* text to pl. xxv. p. 2 (1872).....	G. swinhoii.

Tail of 16 feathers, long, laterally compressed; the centre pair somewhat or considerably longer than the second pair, and at least three times the length of the outer pair.

1st primary considerably shorter than the 2nd, which is equal to the 9th or 10th; the 5th or 6th slightly the longest.

Head with an elongate hairy crest.

Sides of the head naked.

Tarsi considerably longer than the middle toe and claw, and armed in the male with a pair of stout, fairly long spurs.

Range. Himalayas; Indo-Chinese countries.

Key to the Species.

I. General colour above is not olive-brown or reddish brown. (*Males.*)

a. Scapulars not dark crimson with bronze-red reflections.

A. Tail black without any white markings.

a. Breast-feathers dirty white and lanceolate.

a'. Feathers of the lower back and rump margined with white.

a''. Crest white, sometimes mixed with dusky brown ..... *albocristatus*, p. 298.

b''. Crest black ..... *leucomelanus*, p. 300.

b'. Feathers of the lower back and rump not margined with white ..... *muthura*, p. 301.

b. Breast-feathers black, only moderately pointed; feathers of the lower back and rump widely margined with white ..... *horsfieldi*, p. 302.

B. Tail black vermiculated with white, inner margins of the middle pair of feathers without white; feathers of the lower back, rump, and upper tail-coverts margined with white.

c. White vermiculations on the mantle, scapulars, and wing-coverts wide-set, irregular, and very fine ..... *cuvieri*, p. 303.

d. White vermiculations on the mantle, scapulars, and wing-coverts much coarser and more regular, an outer submarginal white line parallel to the edge of each feather ..... *davisoni*, p. 304.

C. Tail black vermiculated with white, inner margins of the middle pair of feathers white; feathers of the lower back, rump, and upper tail-coverts fringed with white; mantle, scapulars, and wing-coverts black, with fine close white vermiculations .. *oatesi*, p. 306.

D. Tail black, with irregular oblique white lines nearly or quite as wide as the black interspaces; inner web and last third of middle pair of tail-feathers white.

e. Mantle black, finely vermiculated with irregular transverse white lines..... *lineatus*, p. 304.

f. Mantle black, each feather with five or six regular white lines parallel to the edge and nearly as wide as the black interspaces ..... *andersoni*, p. 306.

E. Tail white, the outer pairs of feathers with irregular oblique black lines; plumage of the upper parts white, each feather with five or six narrow regular black lines parallel to the edge ..... *nycthemerus*, p. 307.

β. Scapulars dark crimson, with bronze-red reflections; crest and upper back pure white. *swinhoii*, p. 309.

II. General colour above olive- or reddish brown. (*Females**.)

γ. Scapulars and wing-coverts without triangular buff spots.

A. Feathers of the breast and underparts either margined with white or buff, or with white or buff shaft-stripes, or with both characters combined.

a. Sides of the neck without triangular white shaft-spots; mantle without white V-shaped shaft-stripes.

a'. Outer tail-feathers black.

a''. Underparts with white shafts, but never pale shaft-stripes.

a'''. Underparts light reddish brown. *albocristatus*, p. 298.

b'''. Underparts dark reddish brown or dark brown ..... *leucomelanus*, p. 300. / *muthura*, p. 301.

b''. Underparts usually with narrow buff shaft-stripes..... *horsfieldi*, p. 302.

b'. Outer tail-feathers washed with chestnut towards the base ..... *cuvieri*, p. 303.

c'. Outer tail-feathers chestnut; underparts with buff shaft-stripes ..... *oatesi*, p. 306.

b. Sides of the neck with triangular white shaft-spots; mantle with white V-shaped shaft-stripes; outer tail-feathers reddish brown, with irregular white black-edged bars.

d'. Underparts with narrower pointed white shaft-stripes; outer webs of the secondaries mottled with buff and black along the margin only .. *lineatus*, p. 304.

e'. Underparts with wider pointed white shaft-stripes; outer webs of the secondaries with irregular oblique buff bars reaching to the shaft.... *andersoni*, p. 306.

B. Feathers of the breast and underparts without either pale margins or shaft-stripes; sides of the neck and mantle without any white shaft-marks; outer tail-feathers black, with irregular oblique white lines ..... *nycthemerus*, p. 307.

δ. Scapulars and wing-coverts each with a subterminal triangular yellowish-buff spot widely edged with black; inner webs of the primaries with wide alternate bars of chestnut and black ..... *swinhoii*, p. 309.

1. Gennæus albocristatus.

Phasianus albocristatus, *Vig. P. Z. S.* 1830, p. 9, & 1832, p. 16; *id. Phil. Mag.* 1831, p. 60; *Gould, Cent. B. Himal.* pls. 66, 67 [text] (1832); *Vigne, P. Z. S.* 1841, p. 6 [Alpine Punjab].

Gennæus albocristatus, *Wagl. Isis*, 1832, p. 1228.

Phasianus hamiltonii, *Gray, in Griff. ed. Cuv.* iii. p. 27 (1829); *id. Ill. Ind. Zool.* i. pl. 41 (1830–32).

Euplocomus leucomelanos, *Gray, List of B.* pt. iii. p. 25 (1844) [part.].

* The female of *G. davisoni* is at present unknown.

Euplocomus leucomelas, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844) [part. no. 80 ♀]; *id. Icon. ined. in Brit. Mus., Gall.* pl. 14. no. 80 ♀.
Euplocomus albocristatus, *Hutton, J. As. Soc. Beng.* xvii. pt. 2, p. 693 (1848); *Blyth, Cat. Mus. As. Soc.* p. 244 (1849); *Irby, Ibis*, 1861, p. 235 [Kumaon].
Euplocamus albocristatus, *Adams, P. Z. S.* 1858, p. 499 [Simla, Cashmere]; *Sclat. List of Phas.* p. 9 (1863); *Gray, List Gallinæ Brit. Mus.* p. 32 (1867); *id. Hand-l. B.* ii. p. 260 (1870); *Elliot, Mon. Phas.* ii. pl. 18 (1872) [syn. part.]; *Hume & Inglis, Str. F.* v. p. 42 (1877); *Hume & Marsh. Game B. Ind.* i. p. 177, pl. (1878); *Marsh. Ibis*, 1884, p. 423 [Chamba]; *Oates, ed. Hume's Nests & Eggs*, iii. p. 413 (1890).
Gallophasis albocristatus, *Mitch. P. Z. S.* 1858, p. 544, pl. 148. fig. 1, & pl. 149. fig. 3; *Adams, P. Z. S.* 1859, p. 186; *Jerd. B. Ind.* iii. p. 532 (1863) [part.]; *Blyth, Ibis*, 1867, p. 153; *Tytler, Ibis*, 1868, p. 203 [Simla to Mussoorie]; *v. Pelz. Ibis*, 1868, p. 321 [Koteghur]; *Beavan, Ibis*, 1868, p. 380 [Simla]; *Brooks, Ibis*, 1869, p. 60 [Naini Tal, Almorah]; *Hume, N. & E. Ind. B.* p. 526 (1873); *Marsh. B. Nest. Ind.* p. 59 (1877).

Adult male. A long hairy white crest; forehead, sides and back of the head and neck, mantle and wing-coverts, and upper tail-coverts black, glossed with purplish and steel-blue; feathers of the mantle and upper tail-coverts also narrowly margined with dirty white; lower back and rump the same, but with a wide white terminal band; primaries brown; secondaries darker, and slightly glossed with greenish blue on the outer web; chin and throat black; fore part of neck dirty white, gradually shading into brown on the belly and rest of the underparts. Tail black, glossed with purplish blue. Naked facial skin scarlet. Bill greenish white; legs and feet livid white tinged with brown. Total length 25 inches, wing 9·3, tail 11, tarsus 3.

Immature males have the edges of the longer upper tail-coverts finely mottled instead of margined with white; the spurs, too, are small or absent.

A *very young* specimen has the plumage of the upper parts like that of the female, but darker, and most of the feathers of the mantle and wing-coverts have a wide subterminal black band; the underparts are brownish white.

Adult female. A long brownish-grey hairy crest; whole plumage reddish brown, redder on the rump, upper tail-coverts, chest, and rest of the underparts; feathers of the upper parts finely vermiculated with blackish and edged with grey, except those of the wing-coverts and underparts, where the margins are white; chin, throat, and middle of belly dirty white; primaries brown; middle pair of tail-feathers reddish finely mottled with black, rest black glossed with steel-blue. Total length 22·5 inches, wing 8·8, tail 8·8, tarsus 2·5.

Immature females differ only in having the middle pair of tail-feathers with rather strongly marked wavy bars and mottlings of buff.

Hab. Lower and middle ranges of the Western Himalayas, from Hazara to Kumaon and Western Nepal.

a. ♂ ad. st.	Himalayas.	R. Ferguson, Esq. [P.].
b. ♂ ad. sk.	Himalayas.	Gould Coll.

c, d. ♂ ♀ nr. ad. sk.	Uri, Cashmere, Dec.	Rev. H. Lansdell [C.].
e. ♂ ad. sk.	N.W. Himalayas (*Griffiths*).	India Museum [P.].
f–h. ♂ ♀ ad. sk.	N.W. of Simla (*S. Pinwill*).	Tweeddale Coll.
i–o. ♂ ♀ ad. et imm. sk.	Koteghur.	Hume Coll.
p. ♂ ad. sk.	Koowanoo, Khunaitee, Jan. (*A. O. H.*).	Hume Coll.
q. ♀ ad. sk.	Kotekhaie, Feb.	Hume Coll.
r. ♂ ad. sk.	Kooloo, Feb.	Hume Coll.
s. ♂ ad. sk.	Nagkunda, Oct. (*A. O. H.*).	Hume Coll.
t. ♂ ad. sk.	Mulwah Tal, Oct. (*A.O.H.*).	Hume Coll.
u–z. ♂ ♀ ad. et imm. sk.	Simla, Nov., Dec. (*W. Davison*).	Hume Coll.
a′. ♂ ad. sk.	Simla, Sept. (*R. C. Beavan*).	Tweeddale Coll.
b′. ♀ ad. sk.	Simla.	India Museum [P.].
c′. ♀ juv. sk.	Umballah, Nov. (*R. C. B.*).	Tweeddale Coll.
d′. ♂ juv. sk.	Saharunpur Dist.	Hume Coll.
e′. ♀ imm. sk.	Mussooree.	Hume Coll.
f′. ♀ ad. sk.	Kaladoongee, Dhoon, Sept. (*A. O. H.*).	Hume Coll.
g′. ♂ juv. sk.	Kalsi (*G. F. L. Marshall*).	Hume Coll.
h′–n′. ♂ ♀ ad. et imm. sk.	Bhagirati Valley.	Hume Coll.
o′–q′. ♂ ♀ ad. sk.	Kumaon.	Tweeddale Coll.
r′–v′. ♂ ad., ♀ imm. sk.	Kumaon (*Strachey*).	India Museum [P.].
w′. ♂ ♀ ad. sk.	Western Nepal.	B. H. Hodgson, Esq. [P.].

x′. Skeleton.

2. Gennæus leucomelanus.

Coloured Pheasant, *Lath. Gen. Syn. Suppl.* i. p. 210 (1787); *id. Gen. Hist.* viii. p. 203 (1823).

Phasianus leucomelanos, *Lath. Ind. Orn.* ii. p. 633 (1790); *Bonnat. Tabl. Encycl. Méth.* i. p. 189 (1791); *Temm. Pig. et Gall.* ii. p. 353 (1813), iii. p. 670 (1815); *Vieill. N. Dict. d'Hist. Nat.* xi. p. 40 (1817); *Vig. P. Z. S.* 1832, p. 16.

Nepaul Pheasant, *Lath. Gen. Hist.* viii. p. 202 (1823).

Euplocomus leucomelanos, *Gray, List of B.* pt. iii. p. 25 (1844) [part.].

Euplocomus leucomelas, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844); *id. Icon. ined. in Brit. Mus., Gall.* pl. 14. fig. 79.

Gallophasis leucomelanos, *Gray, Gen. B.* iii. p. 498 (1845); *id. Cat. Hodgs.* ed. 1, p. 124 (1846); *Hutton, J. As. Soc. Beng.* xvii. pt. 2, p. 694 (1848).

Gallophasis albocristatus, *Jerd. B. Ind.* iii. p. 532 (1863) [part.].

Euplocomus leucomelanos, *Gray, List Gallinæ Brit. Mus.* p. 33 (1867); *id. Hand-l. B.* ii. p. 260 (1870).

Euplocamus leucomelanus, *Hume, Str. F.* vii. p. 428 (1878); *Hume & Marsh. Game B. Ind.* i. p. 185, pl. (1878).

Gallophasis leucomelanus, *Scully, Str. F.* viii. p. 345 (1879) [Nepal].

Adult male. Plumage like that of *G. albocristatus*, but the crest is black glossed with purplish blue, and the terminal white bars to the rump and upper tail-coverts are usually narrower. Size smaller.

Adult female. Perfectly similar to the female of *G. albocristatus*, but rather darker.

Young specimens differ from their adults in the same points mentioned under the young of *G. albocristatus*.

Hab. Nepal.

a. ♂ ad. st.	Nepal.	B. H. Hodgson, Esq. [P.].
b–i. ♂ ♀ ad. et imm. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
k. ♀ imm. sk. [var.].	Nepal.	B. H. Hodgson, Esq. [P.].
l, m. ♂ ad. et ♀ imm. sk.	Nepal.	Hume Coll.
n. ♂ ad. sk.	Nepal.	Gould Coll.
o–v. ♂ ♀ ad., imm., et pull. sk.	Nepal Valley, Jan., June–Aug., and Oct. (*J. Scully*).	Hume Coll.
w–y. ♂ ♀ ad. sk.	Dolaka, Nepal, Dec., Jan. (*L. Mandelli*).	Hume Coll.

z. Imperfect skeleton.

3. Gennæus muthura.

Chittygong Pheasant, *Lath. Gen. Hist.* viii. p. 200 (1823).
Phasianus muthura, *Gray, in Griff. ed. Cuv.* iii. p. 27 (1829).
Gallophasis muthura, *Gray, Gen. B.* iii. p. 498 (1845).
Euplocomus melanotus (*Blyth*), *Hutton, J. As. Soc. Beng.* xvii. pt. 2, p. 694 (1848); *Blyth, Cat. Mus. As. Soc.* p. 244 (1849).
Gallophasis melanotus, *Hodgs. Icon. ined. in Brit. Mus., Gall.* App. pl. no. 937; *Gray, Gen. B.* iii. App. p. 24 (1849); *Mitch. P. Z. S.* 1858, p. 544, pl. 149. fig. 2; *Gray, Cat. Hodgs.* ed. 2, p. 68 (1863); *Jerd. B. Ind.* iii. p. 534 (1863); *Hume, N. & E. Ind. B.* p. 527 (1873); *Marsh. B. Nest. Ind.* p. 59 (1877).
Euplocamus melanotus, *Sclat. List of Phas.* p. 9 (1863) [Sikkim and Bhotan]; *Gray, List Gallinæ Brit. Mus.* p. 33 (1867); *id. Hand-l. B.* ii. p. 260 (1870); *Elliot, Mon. Phas.* ii. pl. 119 (1872); *Hume & Inglis, Str. F.* v. p. 42 (1877).
Gallophasis melanonotus, *Beavan, Ibis*, 1868, p. 381 [Darjeeling, Interior of Sikhim, 2000–7000 ft.]; *Bulger, Ibis*, 1869, p. 170 [Darjeeling].
Euplocomus melanonotus, *Hume & Marsh. Game B. Ind.* i. p. 191, pl. (1878).
Euplocamus melanonotus, *Oates, ed. Hume's Nests & Eggs*, iii. p. 415 (1890).

Adult male. Differs from the male of *G. leucomelanus* in having the feathers of the lower back and rump glossed with uniform deep purplish blue, without white terminal bands, the general gloss of the head, neck, and mantle more intense purple.

Adult female is not to be distinguished from the female of *G. leucomelanus*.

Hab. Sikhim, Native Sikhim, Western Bhootan. ? Eastern Nepal.

a–e. ♂ ad. et imm. sk.	Native Sikhim, Jan.–March (*L. Mandelli*).	Hume Coll.
f–k. ♂ ♀ ad. et imm. sk.	Sikhim (*L. Mandelli*).	Hume Coll.
l–f'. ♂ ♀ ad. et imm. sk.	Sikhim, Jan.–April, June, Aug., Oct., Nov. (*L. M.*).	Hume Coll.
g'–q'. ♂ ♀ ad. et imm. sk.	Darjeeling.	Hume Coll.
r', s'. ♂ ad. et ♀ imm. sk.	Darjeeling.	Gould Coll.
t', u'. ♂ ♀ ad. st.	Darjeeling.	B. H. Hodgson, Esq. [P.].

v'–z'. ♂ ♀ ad. et imm. sk.	Darjeeling.	B. H. Hodgson, Esq. [C.].
a'', *b''*. ♂ ad. et ♀ imm. sk.	Mongphoo (*J. Gammie*).	Hume Coll.
c''. ♂ imm. sk.	[Darjeeling.]	Zool. Soc. Coll.
d''. ♀ ad. sk.	Lower Hills, Bhootan Doars, Jan. (*L. Mandelli*).	Hume Coll.
e''–g''. ♀ ad. st. et imm. sk.	No locality.	Zool. Soc. Coll.
h''. Skeleton.		

Hybrid between Acomus erythrophthalmus *and* Gennæus muthura. *See* p. 284.

Hybrid between Gennæus muthura *and* Phasianus colchicus.

a. ♂ ad. st.	Hampshire.	P. L. Sclater, Esq. [P.].

4. Gennæus horsfieldi.

Sylhet Pheasant, *Lath. Gen. Hist.* viii. p. 208 (1823).
? Phasianus lathami, *Gray, in Griff. ed. Cuv.* iii. p. 26 (1829).
Gallophasis horsfieldi, *Gray, Gen. B.* iii. p. 498, pl. cxxvi. (1845); *Mitch. P. Z. S.* 1858. p. 544, pl. 148. fig. 2, pl. 149. fig. 1; *Sclat. & Wolf, Zool. Sket.* 2. pl. 39 (1861).
Euplocomus horsfieldi, *Blyth, Cat. Mus. As. Soc.* p. 244 (1849).
Euplocamus horsfieldi, *Sclat. List of Phas.* p. 9 (1863) [Assam, Sylhet]; *Gray, List Gallinæ Brit. Mus.* p. 33 (1867); *id. Hand-l. B.* ii. p. 260 (1870); *Elliot, Mon. Phas.* ii. pl. 20 (1872); *Hume & Inglis, Str. F.* v. p. 42 (1877) [Cachar]; *Hume & Marsh. Game B. Ind.* i. p. 198, pl. (1878); *Fasson, Str. F.* ix. pp. 203, 205 (1880) [Chittagong Dist.]; *Hume, Str. F.* xi. p. 303 (1888) [N. Arrakan, Manipur]; *Oates, ed. Hume's Nests & Eggs*, iii. p. 416 (1890).
Euplocomus cuvieri, *Hume & Marsh. Game B. Ind.* i. pl. only (1878).

Adult male. Black glossed with purplish or steel-blue; feathers of the lower back, rump, and upper tail-coverts with a terminal white band very narrow on the latter; soft parts as in *G. albocristatus*. Size the same as in the other species.

Immature males have less gloss on the feathers, the edges of the wing-coverts, scapulars, and upper tail-coverts, and the outer margins of the secondaries vermiculated with rufous and buff.

Adult female. Resembles the female of *G. leucomelanus* or *G. muthura*, but in old specimens the centre pair of tail-feathers become uniform dark chestnut, whereas in the two latter there is always some black mottling. As a rule the rump is paler and more olive-brown, and contrasts rather strongly with the middle pair of tail-feathers.

Hab. Eastern Bhootan, Assam, Sylhet, Cachar, Manipur, Hill Tipperah, Chittagong, and N. Arrakan; also at Bhámo.

a–c. ♂ ♀ ad. st. et ♂ ad. sk.	Bhootan.	India Museum [P.].
d. ♂ ad. sk.	[Assam.]	Gould Coll.
e. ♂ ad. sk.	Assam (*McClelland*).	India Museum [P.].
f. ♀ ad. sk.	Gauhatti, Assam, Dec. (*W. Davison*).	Hume Coll.
g–k. ♂ ♀ ad. sk.	Sadiya, Assam, March, April (*J. Cockburn*).	Hume Coll.

l. ♂ ad. sk.	Tippook, March (*J. Cockburn*).	Hume Coll.
m. ♀ ad. sk.	Dollah, May (*J. Cockburn*).	Hume Coll.
n–p. ♂ ♀ ad. sk.	Dibrughur, March, April (*J. R. Cripps*).	Hume Coll.
q–s. ♂ ♀ ad. sk.	N. Khasia Hills, March, April (*A. W. Chennell*).	Tweeddale Coll.
t–w. ♂ ♀ ad. sk.	Dilkoushah, Cachar, Jan. (*W. Davison and J. Inglis*).	Hume Coll.
x, y. ♀ ad. et ♂ imm. sk.	Cachar (*J. Inglis*).	Hume Coll.
z–l'. ♂ ♀ ad. et imm. sk.	Manipur, Feb. to May (*A. O. H.*).	Hume Coll.
m', n'. ♂ ♀ ad. sk.	Tipperah.	Hume Coll.
o'. ♂ ad. sk.	N. Arrakan.	Hume Coll.
p'–s'. ♂ ad. et imm. sk.	N. Arrakan (*McClelland*).	India Museum [P.].
t', u'. ♂ ♀ imm. sk.	Bhâmo.	E. W. Oates, Esq. [C.].
v'–x'. ♂ imm. et pull. sk.	No locality.	Zool. Soc. Coll.
y'. Skeleton.		

Hybrid between Gennæus horsfieldi *and* Phasianus versicolor.

a. ♀ ad. st.	England.	Zool. Soc. Coll.

Subsp. *a.* Gennæus cuvieri.

Hybrid between Phasianus fasciatus and P. leucomelanos, *McClell. Calcutta Journ. N. H.* ii. p. 147 (1842).

Lophophorus cuvieri, *Temm. Pl. Col.* v. pl. 10 [no. 1] (1820); *Less. Man. d'Orn.* ii. p. 179 (1828); *Steph. in Shaw's Gen. Zool.* xiv. p. 300 (1826); *Griff. ed. Cuv.* iii. p. 14, pl. (1829); *Guérin-Méneville, Icon. Règ. Anim., Ois.* pl. 40. fig. 2 (1829–38); *Less. Traité d'Orn.* p. 489 (1831); *Schinz, Nat. Abbild. Vög.* p. 253, pl. 98 (1833); *Blyth, Ibis*, 1867, p. 153.

Lophyrus cuvieri, *Steph. in Shaw's Gen. Zool.* xiv. pl. 36 (1826).

Houppifer cuvierii, *Guérin-Méneville, Icon. Règ. Anim., Ois.* p. 25 (1829–38).

Gallophasis cuvieri, *Gray, Gen. B.* iii. p. 498 (1845).

Euplocomus cuvieri, *Gray, Hand-l. B.* ii. p. 260 (1870); *Sanders. Str. F.* viii. p. 493 (1879) [Chittagong].

Euplocamus cuvieri, *Hume & Marsh. Game B. Ind.* i. p. 202 (1878); *Oates, B. Burmah*, ii. p. 318 (1883) [part.].

Monaulus melanion, *Vieill. Tabl. Encycl. Méth.* i. p. 366, pl. 237. fig. 1 (1823).

Alectrophasis leucomelanos, *Gray, List Gen. B.* p. 78 (1841).

Euplocomus lineatus, *Blyth, Cat. Mus. As. Soc.* p. 244 (1849) [part.].

Adult male. Resembles the male of *G. horsfieldi*, but all the feathers of the upper parts are finely pencilled with irregular wavy white lines; the inner webs of the centre pair of tail-feathers are black to the edges. Size and soft parts as in *G. horsfieldi*.

Adult female resembles the female of *G. horsfieldi*, but all the tail-feathers are more or less mixed with dull rufous mottled with black, the outer pairs only being black towards the extremity.

Hab. Northern Arrakan Hills and Chittagong.

a, b. ♂ ♀ ad. sk.	Arrakan Hills.	Zool. Soc. Coll.
c. ♂ ad. sk.	Arrakan Hills (*Capt. Boyle*).	Zool. Soc. Coll.
d. Sternum.		

Subsp. β. Gennæus davisoni.

Euplocamus andersoni, *Anderson (nec Elliot)*, *B. W. Yunnan*, p. 670 (1878) [younger male].

Euplocamus lineatus, *Anderson (nec Vig.)*, *B. W. Yunnan*, p. 669 (1878) [above Mandalay].

Immature male. Differs from *G. cuvieri* in having the white lines on the feathers of the upper parts coarser and more regular, especially on the mantle, scapulars, and wing-coverts. The feathers of these parts have an outer submarginal white line parallel to the edge, within which are four or five irregular but more or less parallel lines. In this respect the present subspecies approaches *G. andersoni*, but the white lines are narrower and the black interspaces broader than in the former.

Hab. Kachin Hills east of Bhâmo.

a. ♂ ad. sk.	Kachin Hills, Yunnan, Feb.	Dr. J. Anderson [P.].	(Type of the subspecies.)

5. Gennæus lineatus.

Lineated Pheasant, *Lath. Gen. Hist.* viii. p. 201 (1823).

Phasianus lineatus, *Vig. Phil. Mag.* 1831, p. 147; *id. P. Z. S.* 1831, p. 24; *Jard. & Selb. Ill. Orn.* n. s. pl. 12 (1836).

Phasianus reynaudii, *Less. Traité d'Orn.* p. 495 (1831); *id. in Bélang. Voy. Ind. Orient.* p. 276, pls. 8, 9 (1834) [Pegu].

Gennæus lineatus, *Wagl. Isis*, 1832, p. 1228; *Oates, Str. F.* v. p. 164 (1877).

Phasianus fasciatus, *McClell. Calcutta Journ. N. H.* ii. p. 146, pl. iii. (1842) [Arrakan ?].

Gallophasis lineatus, *Gray, Gen. B.* iii. p. 498 (1845); *Hume, Str. F.* ii. p. 482 (1874) [Tenasserim].

Gallophasis fasciatus, *Gray, Gen. B.* iii. p. 498 (1845).

Euplocomus lineatus, *Blyth, Cat. Mus. As. Soc.* p. 244 (1849) [part.]; *Gray, Hand-l. B.* ii. p. 260 (1870).

Euplocamus lineatus, *Sclat. & Wolf, Zool. Sket.* 2. pl. 38 (1861); *id. List of Phas.* p. 8, pl. 9 (1863) [Tenasserim and Pegu]; *Gray, List Gallinæ Brit. Mus.* p. 34 (1867); *Elliot, Mon. Phas.* ii. pl. 23 (1872); *Hume, N. & E. Ind. B.* p. 525 (1873); *Gould, B. Asia*, vii. pl. 14 (1875); *Hume, Str. F.* iii. p. 165 (1875) [Pegu Hills east of the Irrawaddy R.]; *Hume & Marsh. Game B. Ind.* i. p. 205, pl. (1878); *Hume & Davison, Str. F.* vi. p. 436 (1878) [Tenasserim]; *Bingham, Str. F.* ix. p. 195 (1880) [Thoungyeen jungles]; *Oates, Str. F.* x. p. 236 (1882) [Pegu]; *Oates, B. Burmah*, ii. p. 316 (1883) [E. slope Arrakan Hills ?, Siam, Irrawaddy Valley to Bhâmo]; *Oates, ed. Hume's Nests & Eggs*, iii. p. 416 (1890).

Nycthemerus lineatus, *Blyth & Walden, Cat. Mamm. & B. Burma*, p. 149 (1875) [Karen Hills].

Adult male. Top of the head and elongate crest black, glossed with purplish blue; back and sides of the neck, back, rump, upper tail-coverts, lesser and median wing-coverts, and scapulars finely

vermiculated with alternate black and white lines, running chiefly across the feathers: primaries and their coverts blackish brown; secondaries and secondary-coverts black, all with obliquely-irregular white lines; chin, throat, fore part of neck, and rest of underparts black with a slight blue gloss; the feathers on the sides of the breast always have white shaft-stripes *. Middle pair of tail-feathers dirty white, more or less vermiculated with black on the outer web except at the extremity; rest of the feathers obliquely vermiculated with black and white, the black gradually increasing and the white diminishing on each successive feather, so that the outer pair are black, obliquely vermiculated with white. Bill bluish or brownish horny; facial skin blood-red; legs and feet fleshy brown. Total length 29 inches, wing 9·7, tail 12, tarsus 3·3.

In an *immature male* the wing-coverts and scapulars are intermixed with pale olive-brown feathers, greyish towards the tip and vermiculated with black; some of the black feathers of the breast are mixed with brown, and the white shaft-stripes are mostly confined to the feathers of the sides and flanks.

Adult female. Top of the head and crest tinged with rufous, rest of the upper parts olive-brown; most of the feathers of the mantle with V-shaped white marks narrowly edged with black; inner webs of the primaries and secondaries brown; the outer webs of the latter slightly mottled with whitish buff along the margin; sides of the neck with triangular white spots; chin, throat, and fore part of neck whitish; rest of the underparts brownish chestnut, each feather with a pointed white shaft-stripe margined with black. Middle pair of tail-feathers buff, mottled on the outer web and also slightly on the inner with black; the six outer pairs are reddish brown, with wide irregular white bars mottled and widely margined with black; the second pair have the basal two-thirds like the outer pairs, and the terminal third buff mottled with black like the middle pair. Total length 22·5 inches, wing 8·9, tail 8·7, tarsus 2·7.

Hab. Pegu, Tonghoo and Karen Hills, Tenasserim as far south as Tavoy, and N.W. Siam. It is also stated to extend up the Irrawaddy Valley as far as Bhâmo.

a–e. ♂ ♀ ad. et pull. st.	No locality.	Zool. Soc. Coll.
f. ♂ ad. sk.	[Arrakan Hills] (*Capt. Bogle*).	Zool. Soc. Coll.
g. ♂ ad. sk.	Upper Pegu, March.	E. W. Oates, Esq. [C.].
h–k. ♂ ad. sk.	E. Pegu Hills, April.	E. W. Oates, Esq. [C.].
l–p ♂ ♀ ad. et ♀ imm. sk.	Tonghoo Hills, Feb. to April (*R. G. W. R.*).	Tweeddale Coll.
q–u. ♂ ♀ ad. et ♂ imm. sk.	Karen Hills, Jan. and May (*R. G. W. R.*).	Tweeddale Coll.

* In some fully adult and very old specimens almost all the feathers of the breast and belly have white shaft-stripes, while in other equally adult examples these marks are absent except on the sides of the breast; this character seems to have no reference to age or locality, and appears to be individual.

v, *w*. ♂ ♀ ad. sk.	Lower Pegu, Jan. and Dec.	E. W. Oates, Esq. [C.].
x, *y*. ♂ ad. sk.	Pahpoon, Feb. and Dec. (*W. Davison*).	Hume Coll.
z, *a'*. ♂ ad. sk.	Salween Dist., Jan. (*W. Davison*).	Hume Coll.
b'. ♂ ad. sk.	Thoungyeen R., Oct. (*C. T. Bingham*).	Hume Coll.
c'. ♂ ad. sk.	Foot of Donat, Thoungyeen Valley, Jan.	C. T. Bingham, Esq. [C.].
d'. ♂ ad. sk.	Wimpong, Dec. (*W. Davison*).	Hume Coll.
e'. ♂ ad. sk.	Tenasserim (*Helfer*).	India Museum [P.].

Hybrid between Lophura diardi *and* Gennæus lineatus. *See* p. 291.

Subsp. *a*. Gennæus oatesi.

Lophophorus cuvieri, *Hume* (*nec Temm.*), *Str. F.* iii. p. 166 (1875) [S.E. Arrakan Hills].

Euplocamus cuvieri, *Oates*, *Str. F.* iii. p. 343 (1875); *id. B. Burmah*, ii. p. 318 (1883) [part.; near Prome, S.E. Arrakan Hills].

Euplocamus lineatus, *Feilden* (*nec Vig.*), *Str. F.* iii. p. 168 (1875) [Thayetmyo Hills).

Adult male. Resembles the adult male of *G. lineatus*, but differs in having the feathers of the lower back and rump fringed with white and only the margins of the inner webs of the middle pair of tail-feathers white, without any black marking. In one specimen the feathers of the sides of the breast have white shaft-stripes; in another they are uniform black. Size and soft parts the same as given for *G. lineatus*.

Adult female. Resembles the female of *G. horsfieldi* in general plumage, and differs from that of *G. lineatus* in having no white triangular spots on the sides of the neck, while the underparts are warm brown, with narrow buff-coloured shafts, much the same as in *G. horsfieldi*. It differs, moreover, from both these, as well as from the other nearly allied forms, in having the outer tail-feathers chestnut slightly mottled with black, as in *Lophura rufa*, while the centre pair are brownish buff thickly mottled with wavy lines of black.

Hab. South-eastern Arrakan Hills in the vicinity of Prome and Thayetmyo.

a, *b*. ♂ ♀ ad. sk.	S.E. Arrakan Hills, near Prome, lat. 19° N., Jan.	E. W. Oates, Esq. [C.]. (Types of the subspecies.)
c. ♂ ad. sk.	Arrakan Hills (*Capt. Bogle*).	India Museum [P.].

6. Gennæus andersoni.

Euplocamus andersoni, *Elliot*, *P. Z. S.* 1871, p. 137; *id. Mon. Phas.* ii. pl. xxii. (1872); *Anderson*, *B. W. Yunnan*, p. 670, pl. liii. (1878) [Kachin Hills] [type-specimen only]; *Hume & Marsh. Game B. Ind.* i. pl. (1878); *Oates*, *B. Burmah*, ii. p. 319 (1883).

Nycthemerus andersoni, *Blyth & Walden, Cat. Mamm. & B. Burma*, p. 149 (1875).

Euplocamus crawfurdi, *Hume & Davison, Str. F.* vi. pp. 437, 521 (1878) [Dargwin, N. Tenasserim]; *Hume & Marsh. Game B. Ind.* i. p. 203, pl. (1878).

Adult male. Differs from the adult male of *G. lineatus* in having every feather of the mantle and wing-coverts regularly marked on each web with about ten alternate black and white concentric bands; it differs from the adult male of *G. davisoni* in having the tail similarly marked to that of *G. lineatus*, and the breast-feathers with white shaft-stripes. Bill pale bluish horny; facial skin deep crimson; legs and feet dark pinkish flesh-colour. Total length 28 inches, wing 9·9, tail 13·6, tarsus 3·4.

Adult female. Resembles the female of *G. lineatus*, but the white shaft-stripes on the feathers of the underparts are much wider, and the outer webs of the secondaries are obliquely marked with wavy buff bars. Total length 23·5 inches, wing 9·3, tail 9·7, tarsus 3·1.

Hab. Kachin Hills east of Bhâmo and the Salween Valley as far south as Dargwin.

a. ♀ ad. sk.	20 m. N. of Kollidoo, Salween Dist., Jan. (*W. Davison*).	Hume Coll.
b. ♀ ad. sk.	Kollidoo, Nov. (*W. Davison*).	Hume Coll.
c, d. ♂ ♀ ad. sk.	Dargwin, Salween Dist., Jan. (*W. Davison*).	Hume Coll.

7. Gennæus nycthemerus.

White China Pheasant, *Albin, Nat. Hist. B.* iii. p. 35, pl. xxxvii. (1740).

Black and White Chinese Pheasant, *Edw. Nat. Hist. B.* ii. pl. 66 (1747).

Phasianus nycthemerus, *Linn. S. N.* i. p. 272 (1766); *Gm. S. N.* i. pt. ii. p. 743 (1788); *Lath. Ind. Orn.* ii. p. 631 (1790); *Bonnat. Tabl. Encycl. Méth.* i. p. 187, pl. 89. figs. 1 & 2 (1791); *Hayes, Osterl. Menag.* p. 13, pls. 13 & 14 (1794); *Temm. Pig. et Gall.* ii. p. 281 (1813), iii. p. 665 (1815); *Vieill. N. Dict. d'Hist. Nat.* xi. p. 40 (1817); *Steph. in Shaw's Gen. Zool.* xi. p. 234 (1819); *Griff. ed. Cuv.* iii. p. 23 (1829); *Less. Traité d'Orn.* p. 495 (1831); *Schinz, Nat. Abbild. Vög.* p. 248, pl. 95 (1833); *Jard. Nat. Lib., Orn.* iv. p. 207, pl. xviii. (1834); *Schinz, Nat. Vög.* p. 148, pl. 71 (1853).

Faisan noire et blanc de la Chine, *D'Aubent. Pl. Enl.* pls. 123, 124; *Buff. Hist. Nat. Ois.* ii. p. 359 (1771).

Pencilled Pheasant, *Lath. Gen. Syn.* ii. pt. ii. p. 719 (1783); *id. Gen. Hist.* viii. p. 199 (1823).

* ? Phasianus crawfurdii, *Gray, in Griff. ed. Cuv.* iii. p. 27 (♂ juv.) (1829).

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* *Phasianus crawfurdi* was described by J. E. Gray from a drawing made by Mr. Crawfurd of a bird obtained at Ava. The description is very meagre, but might apply, as it most likely does, to the *young male* of *G. nycthemerus*. It cannot possibly apply to any known female of the group, for the wing-coverts are described as *white*.

In Gould's 'Birds of Asia' Crawfurd's drawing is erroneously reproduced

Gennæus nycthemerus, *Wagl. Isis*, 1832, p. 1228.
Euplocomus nycthemerus, *J. E. Gray, Ill. Ind. Zool.* ii. pl. 38. fig. 2 (1834); *G. R. Gray, List of B.* pt. iii. *Gall.* p. 25 (1844); *Blyth, Cat. Mus. As. Soc.* p. 244 (1849); *Gray, Hand-l. B.* ii. p. 260 (1870).
Nycthemerus argentatus, *Swains. Class. B.* ii. p. 341 (1837).
Gallophasis crawfurdii, *Gray, Gen. B.* iii. p. 498 (1845).
Gallophasis nycthemerus, *Gray, Gen. B.* iii. p. 498 (1845).
Euplocamus nycthemerus, *Gould, B. As.* vii. pl. 17 (1859); *Sclat. List of Phas.* p. 8 (1863) [Southern China]; *Swinh. P. Z. S.* 1863, p. 307; *Gray, List Gallinæ Brit. Mus.* p. 33 (1867); *Swinh. P. Z. S.* 1871, p. 399; *Elliot, Mon. Phas.* ii. pl. 21 (1872); *David & Oustal. Ois. Chine*, p. 416 (1877) [S. China, Fokien, Chi-kiang].

Adult male. Top of the head and crest black glossed with purple; sides of the head, back, and sides of the neck and rest of the upper parts white, the feathers of the mantle, lower back, rump, and upper tail-coverts each with five or six narrow regular black concentric lines; scapulars, wing-coverts, and quills the same, but the black lines are fewer, coarser, and less regular; chin, throat, fore part of neck, and rest of underparts black, glossed with purple, some of the feathers on the sides of the breast with white shaft-stripes, others with the whole of the outer web white. Tail unusually long; centre pair of tail-feathers pure white, rest white, with irregular oblique black lines gradually increasing in number and thickness towards the outer pair. Bill greenish horn: facial skin blood-red; legs and feet scarlet. Total length 40 inches, wing 10·5, tail 24, tarsus 3·6.

Young male has the upper parts like those of the female, but most of the feathers of the wing-coverts have narrow bars of buff edged with black running parallel to the margin; the outer webs of the secondaries obliquely vermiculated with black and buff lines; most of the feathers of the chin, throat, and chest black, glossed with purple, but the majority of the feathers on the rest of the underparts marked with alternate black and white or black and buff lines running parallel to the edge; tail as in the female.

Adult female. Crest blackish brown; top of the head, rest of upper parts, and middle pair of tail-feathers olive-brown, more or less vermiculated with fine dusky lines; inner webs of the quills brown; chin and throat dirty brownish white; neck and rest of underparts similar to the upper, but the feathers of the belly, thighs, and under tail-coverts are mottled and vermiculated, especially the latter, with black; the second pair of tail-feathers are brownish buff, obliquely vermiculated with brownish black; the outer pairs are black, obliquely vermiculated with white. Colours of soft parts like those of the male, but not so bright. Total length 20·5 inches, wing 9·1, tail 9·8, tarsus 3·2.

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as the female of his *Diardigallus prælatus*. The figure given there agrees well with the female of *G. andersoni*, but whether it is an accurate reproduction of Crawfurd's original drawing is impossible to tell; if so, where are the white wing-coverts mentioned by Gray?

What *Phasianus crawfurdi* really was is shrouded in uncertainty, and the name should be dropped.

Immature females have oblique wavy buff lines on the outer webs of the secondaries, and the chest as well as the rest of the underparts are finely vermiculated with blackish.

Hab. South China, Fokien, Chekiang.

a, b. ♂ imm. sk. & ♀ ad. st.	Canton, China.	— Beale, Esq. [P.].
c–f. ♀ imm. et pull. sk.	China.	Purchased.
g. ♂ ad. st.	Richmond, Surrey.	Dr. Dowler [P.].
h. ♂ imm. sk.	S. Wales.	Viscount Emlyn [P.].
i. Skeleton.		
k. Sternum.		

8. Gennæus swinhoii.

Euplocamus swinhoii, *Gould, P. Z. S.* 1862, p. 284 [Formosa]; *Sclat. List of Phas.* p. 7 (1863); *Swinhoe, Ibis*, 1863, p. 401 [Formosa]; *Gould, B. Asia*, vii. pl. 16 (1864); *Swinhoe, Ibis*, 1865, pp. 353, 538, 1866, pp. 133, 308, 404, 1867, pp. 232, 409; *Sclat. & Wolf, Zool. Sket.* 2. pl. 37 (1867); *Gray, List Gallinæ Brit. Mus.* p. 34 (1867); *Touchard, Bull. Soc. Acclim.* pp. 417–423 (1870); *Swinh. P. Z. S.* 1871, p. 399; *Elliot, Mon. Phas.* ii. pl. 25 (1872); *David & Oustal. Ois. Chine*, p. 417, pl. 102 (1877).
Euplocomus swinhoii, *Gray, Hand-l. B.* ii. p. 260 (1870).

Adult male. Feathered parts of the head, the chin, throat, and neck black, the latter slightly glossed with steel-blue; mantle pure white; lower back, rump, and shorter upper tail-coverts black, glossed with purplish blue, and somewhat curled towards the extremity; scapulars dark crimson, with bronze-red reflections; wing-coverts and outer secondaries black, margined with a glossy steel-green band, the ends of these feathers are also slightly curled, giving them, as well as the feathers of the lower back &c., the appearance of having, in some lights, a velvet-black subterminal band: primaries brownish, secondaries and their coverts black; underparts black, richly glossed with purplish blue on the chest, breast, and sides; centre pair of tail-feathers longest, pure white, rest black; sometimes the second pair have the inner web white. Bill and spurs pale horny; facial skin and wattles crimson; legs and feet scarlet. Total length 29·5 inches, wing 9·5, tail 16, tarsus 3·8.

An *immature male* * has the crest short and mixed with black; the mantle chestnut, mixed with black above, most of the feathers with white shaft-stripes; the wing-coverts, lower back, and rump dark chestnut and rufous buff thickly mottled with black, most of the feathers of the latter margined with metallic purplish blue; underparts black without any gloss; and the middle pair of tail-feathers dark chestnut mottled with black.

Adult female. The short crest, top of the head, and neck reddish brown mottled with black, and with rufous-buff shaft-stripes; mantle the same, but the middle of each feather black, and the shaft-stripes are V-shaped; wing-coverts and scapulars similar,

* Swinhoe says that "this plumage is carried through the winter, but it varies in its resemblance to the one sex or the other."

but the black central part is more extensive; lower back, rump, and upper tail-coverts black, closely vermiculated with buff; primaries and secondaries black, the former barred mostly with rufous, except on the margin of the outer web, and the latter mostly with buff; chin and throat whitish brown; chest and upper breast very similar to the mantle, but the ground-colour is pale brown; rest of the underparts rufous buff, with irregular bars and vermiculations of black; middle pair of tail-feathers like the upper tail-coverts, with indistinct wide black bars mottled with buff; seven outer pairs dark chestnut, somewhat mottled with black. Total length 19·6 inches, wing 9·1, tail 7·9, tarsus 3·1.

Hab. Island of Formosa.

a–e. ♂ imm. sk. et pull. st.	Formosa (*R. Swinhoe*).	Zoological Soc. Coll.
f–h. ♂ ♀ ad., ♂ imm. st.	Formosa.	R. Swinhoe, Esq. [C.].
i. ♂ ad. skeleton.	Formosa.	R. Swinhoe, Esq. [C.].

k. Sternum.

33. PUCRASIA *.

	Type.
Eulophus, *Less.* (*nec Geoffr., Hym.* 1764) *Comp. Buffon*, vii. p. 354 (1836)	P. nipalensis.
Pucrasia, *Gray, List Gen. B.* p. 79 (1841)	P. macrolopha.
Gallophasis, *Hodgs. J. As. Soc. Beng.* xii. pt. i. p. 313 (1843)	P. nipalensis.
Lophotetrax, *Cab. Ersch u. Grub. Encycl.* sec. 3, xxii. p. 144 (1846)	P. macrolopha.
Lochmophasis, *Heine, Nomencl. Mus. Hein.* p. 298 (1890)	P. nipalensis.

Tail composed of 16 feathers, long, wedge-shaped; the middle pair of feathers slightly the longest, and about twice as long as the outer pair.

The 1st primary is considerably shorter than the 2nd, which is about equal to the 8th; the 4th is slightly the longest.

Head (in the male) with an elongate crest; the feathers behind the ear-coverts are greatly elongated and surpass the crest in length.

Sides of the head feathered.

Tarsus about equal to the middle toe and claw; armed in the male with a moderately stout and long spur.

Range. Himalayas, from N. Afghanistan and Kafiristan to the mountains of Eastern Thibet, China, and Mantchouria.

Key to the Species.

I. With long crest and elongate bunches of feathers behind the ear-coverts. [*Males.*]

* Doubtful species:—Pucrasia joretiana, *Heude, Ibis*, 1883, p. 225 [Shanghai]; *id. J. f. O.* 1885, p. 456.

A. Basal part of the outer tail-feathers mostly black or black and rufous, never grey.
  a. No distinct yellow nuchal collar.
    a'. Sides and flanks with black shaft-stripes.
      a''. Dark chestnut does not extend round the back of the neck ..... *macrolopha*, p. 311.
      b''. Dark chestnut extending more or less completely round the back of the neck ..... *biddulphi*, p. 313.
    b'. Sides and flanks black, or black and chestnut, narrowly margined with grey.
      c''. Mantle black, or black mixed with chestnut and margined with whitish buff; lower back and rump black, edged with white ..... *nipalensis*, p. 314.
      d''. Mantle uniform dark chestnut; lower back and rump grey, with black shaft-stripes ..... *castanea*, p. 314.
  b. A well-marked yellow nuchal collar ..... *meyeri*, p. 315.

B. Basal part of the outer tail-feathers grey.
  c'. Sides and flanks with grey or buff shaft-stripes.
    e''. With a rufous-yellow nuchal collar; ground-colour of sides and flanks grey ..... *xanthospila*, p. 315.
    f''. With no rufous-yellow nuchal collar; ground-colour of sides and flanks pale rufous buff ..... *darwini*, p. 316.

II. With short crest; no elongate bunches of feathers behind the ear-coverts. [*Females.*]

C. Basal part of the outer tail-feathers black and rufous or chestnut, never grey ..... *macrolopha*, p. 311. *biddulphi*, p. 313. *nipalensis*, p. 314. ? *castanea* *, p. 314. *meyeri*, p. 315.

D. Basal part of outer tail-feathers grey.
  e. Black cross-bar complete ..... *xanthospila*, p. 315.
  d. Black cross-bar incomplete, represented by a black spot situated on the shaft ..... *darwini*, p. 316.

1. Pucrasia macrolopha.

Satyra macrolopha, *Less. Dict. Sci. Nat.* lix. p. 196 (1829); *id. Traité d'Orn.* p. 493 (1831).

Phasianus pucrasse, *Gray, in Griff. ed. Cuv.* iii. p. 26 (1829) [Almorah Hills].

Phasianus pucrasia, *Gray, Ill. Ind. Zool.* i. pl. 40 (1830-32); *Gould, Cent. B. Himal.* pls. 69, 70 (1832); *Vigne, P. Z. S.* 1841, p. 6 [Alpine Punjab].

Euplocomus pucrasia, *Jard. Nat. Lib., Orn.* iv. p. 216, pl. xxi. (1834).

Tragopan pucrasia, *Temm. Pl. Col.* v. text to pl. 15 [no. 545] (1834).

Eulophus macrolophus, *Less. Comp. Buff.* vii. p. 354 (1836).

Pucrasia macrolopha, *Gray, List of B.* pt. iii. *Gall.* p. 31 (1844) [part]; *id. Gen. B.* iii. p. 503 (1844); *Hutton, J. As. Soc. Beng.* xvii. pt. 2,

* The female of *P. castanea*, as far as I am aware, is unknown.

p. 694 (1848); *Gould, B. Asia*, vii. pl. 26 (1854); *Adams, P. Z. S.* 1858, p. 500 [Simla]; *Irby, Ibis*, 1861, p. 235 [Kumaon]; *Jerd. B. Ind.* iii. p. 524 (1863); *Gray, List Gallinæ Brit. Mus.* p. 30 (1867); *Tytler, Ibis*, 1868, p. 203 [Simla to Mussooree]; *v. Pelz. Ibis*, 1868, p. 321 [Koteghur]; *Beavan, Ibis*, 1868, p. 380 [Simla]; *Brooks, Ibis*, 1869, p. 60 [Naini Tal, Almorah]; *Gray, Hand-l. B.* ii. p. 258 (1870); *Elliot, Mon. Phas.* i. pl. 28 (1872).

Phasianus macrolopha, *Blyth, Cat. Mus. As. Soc.* p. 245 (1849) [part].

Adult male. Long occipital crest bright buff; a large snow-white patch on each side of the neck; rest of the head, chin, throat, and fore part of neck black, glossed with dark green, the patch of feathers on each side above the ear-coverts being enormously elongated and considerably surpassing the crest in length; mantle, lower back, rump, and upper tail-coverts grey, wing-coverts and scapulars browner and more or less tinged with olive and rufous; all the feathers of the mantle and most of the wing-coverts with a moderately wide black shaft-stripe extending to the end of the feather; greater secondary-coverts and scapulars with a black subterminal blotch; in very old birds the black shaft-stripes on the lower back, rump, and upper tail-coverts (with the exception of the median line of feathers) are not visible, being confined to the basal half of the feathers. Quills brown, the outer webs of the second to the sixth primary buff, and the margins of the outer webs of the secondaries greyish brown; the middle of the chest, breast, and belly dark chestnut; feathers of the sides greyish white, with narrow or moderate black shaft-stripes. Centre pair of tail-feathers chestnut, blackish down the middle and tipped with brownish grey; outer pairs black, shading into brownish red on the basal three-quarters of the outer web and narrowly tipped with white. Bill black; legs and feet grey, tinged with flesh-colour or purplish. Total length 23 inches, wing 9·4, tail 9·5, tarsus 2·6.

Immature males have the black shaft-stripes on the mantle twice as wide as in adult birds, and on the lower back, rump, and upper tail-coverts they are strongly marked and extend to the extremities of the feathers.

In a *young male* the top of the head is brown, the crest and lengthened feathers are undeveloped, the feathers of the chin and throat are white, those of the fore part of the neck white, margined with black; the back of the neck buff, barred and mottled with black; the chestnut on the breast is only partly represented, and the under tail-coverts are widely tipped with white; otherwise the plumage does not differ much from that of the adult.

Adult female. Top of the head black, with rufous bars, a short occipital crest brown in the middle, buff on each side, and edged and mottled with black; feathers on the nape with black bars glossed with green; feathers of the mantle black, tipped with brownish grey or sandy brown, and with irregular Ψ-shaped rufous shaft-stripes; wing-coverts and scapulars mottled with black and rufous, with buff shaft-stripes, and the longer ones with large black subterminal blotches extending over one or both webs; lower

back, rump, and shorter upper tail-coverts sandy brown, mottled with black, each feather with a wide black centre and a narrow rufous shaft-stripe; longer upper tail-coverts without black centres; quills brown, more or less edged and mottled with buff and rufous; wide buff superciliary stripes; feathers of the cheeks and ear-coverts buff, edged with black; chin and throat white; chest, breast, sides, and flanks like the mantle, but there is less black and the shaft-stripes are much wider; belly white, marked with black; under tail-coverts chestnut, widely tipped with white, separated by a black bar from the chestnut; middle tail-feathers irregularly barred with rufous buff, edged with black; outer feathers black, more or less mixed, especially on the outer web, with chestnut, and tipped with white. Total length 19·6 inches, wing 8·7, tail 7, tarsus 2·2.

Hab. Western Himalayas from Kumaon to Chamba.

a. ♂ imm. sk.	[N.W. Himalayas.]	India Museum [P.].
b, c. ♂ ♀ ad. st.	N.W. Himalayas.	India Museum [P.].
d, e. ♂ ♀ ad. sk.	[N.W. Himalayas.]	Gould Coll.
f. ♀ imm. sk.	Murdan, Dec.	Hume Coll.
g. ♂ ad. sk.	Murree, Oct.	Hume Coll.
h, i. ♂ ♀ ad. sk.	Kotekhaie, Feb.	Hume Coll.
k–q. ♂ ♀ ad. et imm. sk.	Koteghur, March, April, & Dec.	Hume Coll.
r–t. ♂ imm., ♀ ad. sk.	Koteghur, June (*R. C. Beavan*).	Tweeddale Coll.
u–c'. ♂ ♀ ad. et imm. sk.	Simla, Sept., Oct., Nov. (*A. O. H. & W. Davison*).	Hume Coll.
d'–g'. ♂ ♀ ad. et imm. sk.	Simla.	Capt. Stackhouse Pinwill [C.].
h'. ♀ ad. sk.	Hills N. of Mussooree (*Wilson*).	Hume Coll.
i'. ♂ imm. sk.	Mussooree (*W. E. Brooks*).	Hume Coll.
k'–s'. ♂ ♀ ad. et imm. sk.	Bhagirati Valley.	Hume Coll.
t'. ♂ imm. sk.	Kumaon, Oct.	Hume Coll.
u, v. ♀ ad. et juv. skeletons.		

Subsp. *a*. Pucrasia biddulphi.

Pucrasia macrolopha, *Adams* (*nec Less.*), *P. Z. S.* 1859, p. 186 [Cashmere].

Pucrasia biddulphi, *Marsh. Ibis*, 1879, p. 461; *id. J. f. O.* 1879, p. 424; *id. Str. F.* viii. p. 445 (1879) [Cashmere]; *Hume, Str. F.* viii. p. 449 (1879).

Adult male. Differs from typical *P. macrolopha* in having the dark chestnut extending more or less completely round the back of the neck, and the chestnut of the underparts much darker and more or less mixed with black.

Adult female. Similar to the female of typical *P. macrolopha*.

Hab. N.W. Himalayas: Cashmere.

a–c. ♂ ♀ ad. sk.	Cashmere, Nov. (*J. Biddulph*).	Hume Coll. (Types of the species.)
d. ♀ ad. sk.	Cashmere (*Dr. Bellew*).	India Museum [P.].
e. ♂ ad. sk.	Gilgit (*J. Biddulph*).	Hume Coll.

2. Pucrasia nipalensis.

Tragopan pucrasia, *Temm.* (*nec Gray*) *Pl. Col.* v. pl. 15 [nec text] [no. 545] (1834); *Hume, Str. F.* v. p. 138 (1877); *id. Str. F.* vii. p. 124 (1878).

Gallophasis pucrasia, *Hodgs. Icon. med. in Brit. Mus., Gall.* pl. 20. nos. 68, 71; *id. J. As. Soc. Beng.* xii. pt. 1, p. 313 (1843); *id. in Gray's Zool. Misc.* p. 85 (1844).

Pucrasia macrolopha, *Gray, List of B.* pt. iii. *Gall.* p. 31 (1844) [part.]; *id. Cat. Hodgs.* ed. i. p. 126 (1846); *Sclat. List Phas.* p. 3 (1863) [part., Nepal]; *Blyth, Ibis*, 1867, p. 152 [part.].

Phasianus macrolopha, *Blyth, Cat. Mus. As. Soc.* p. 245 (1849) [part.].

Pucrasia nipalensis, *Gould, P. Z. S.* 1854, p. 100 [Nepal, Bhotan]; *id. B. Asia*, vii. pl. 28 (1854); *Sclat. List Phas.* p. 4 (1863) [Bhotan]; *Gray, List Gallinæ Brit. Mus.* p. 30 (1867); *id. Hand-l. B.* ii. p. 258 (1870); *Hume, Str. F.* vii. p. 428 (1878); *Hume & Marsh. Game B. Ind.* i. p. 166, pl. (1878); *Marsh. Ibis*, 1879, p. 463 [Bhotan]; *Scully, Str. F.* viii. p. 343 (1879) [W. Nepal]; *Hume, Str. F.* viii. p. 449 (1879) [not in Bhotan].

Pucrasia duvaucelii, *Bonap. C. R.* xlii. p. 879 (1856); *Gray, Cat. Hodgs.* ed. 2, p. 68 (1863); *Elliot, Mon. Phas.* i. pl. 29 (1872); *id. Ibis*, 1878, p. 125.

Adult male. Differs chiefly from *P. macrolopha* in having the feathers of the mantle, sides and flanks black, more or less narrowly edged with grey, the feathers of the back and sides of the neck and, in some cases, the mantle edged and mixed with dark chestnut, and the wing-coverts, lower back, rump, and upper tail-coverts black, the former margined with buff and the three latter with white.

Adult female resembles the female of *P. macrolopha*.

Hab. Central Himalayas, Nepal.

a–c. ♂ ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
d–i. ♂ ♀ ad. et imm. sk.	Jumla, W. Nepal, Jan., Aug., Dec. (*J. Scully*).	Hume Coll.

3. Pucrasia castanea.

Pucrasia castanea, *Gould, P. Z. S.* 1854, p. 99 [Kafiristan]; *id. B. Asia*, vii. pl. 27 (1854); *Sclat. List Phas.* p. 4 (1863); *Hume, Str. F.* v. p. 138 (1877); *Elliot, Ibis*, 1878, p. 125 *.

Pucrasia duvaucelii, *Gray, Hand-l. B.* ii. p. 259 (1870); *Marsh. Ibis*, 1879, p. 463 [N. Afghanistan].

Adult male. Differs from *P. macrolopha* in having the upper part of the mantle and neck dark chestnut like the rest of the underparts; most of the feathers of the sides and flanks chestnut or chestnut mixed with black, only a few being black narrowly edged with white as in *P. nipalensis*; and the centre pair of tail-feathers

* Mr. Elliot states that he purchased Gould's type of *P. castanea* and that it is now in the Zoological Museum at Stuttgart. Whatever the specimen he purchased may have been it was certainly not the type, as the two typical specimens of *P. castanea* were both in the collection of the Hon. East India Company, and are now in the British Museum.

sandy brown, shading into grey towards the tip, and with blackish-brown shaft-stripes.

Hab. N. Afghanistan and Kafiristan.

a, *b*. ♂ ad. sk.	Kafiristan (*Griffiths*).	India Museum [P.]. (Types of the species.)	

4. Pucrasia meyeri.

Pucrasia meyeri, *Madarász, Ibis*, 1886, p. 145 [Central Thibet].
Pucrasia darwinii, *Oustal.* (*nec Swinh.*) *Le Nat.* 1886, p. 276 [Yer-ka-lo, Upper Mékong].

Adult male. Differs from the male of *P. xanthospila* in having "the upper tail-coverts fawn-colour, striped and freckled with black; central tail-feathers rufous, becoming whiter at the tips, with two irregular black bands on each side, margined with fawn-colour; outer tail-feathers rich rufous on the outer webs and brownish on the inner margins, banded with black, each feather tipped with pure white."

It will be noted that the description of the upper tail-coverts and tail of *P. meyeri* agrees closely with that of *P. macrolopha*. In other respects the present species appears to be entirely similar to *X. xanthospila*.

Adult female. Differs from the female of *P. xanthospila* in having the middle tail-feathers fulvous vermiculated with black, and the outer tail-feathers rufous, black towards the apex and tipped with white.

Hab. Yer-ka-lo, Upper Mékong to Central Thibet.

5. Pucrasia xanthospila.

Euplocamus pucrasia, *Lamprey* (*nec Gray*), *P. Z. S.* 1862, p. 221.
Pucrasia xanthospila, *Gray, P. Z. S.* 1864, p. 259, pl. xx.; *Milne-Edw. N. Arch. Mus. Bull.* i. p. 14, pl. 1. figs. 3 & 4 (1865) [N.E. of Pekin]; *Saurin, P. Z. S.* 1866, p. 937 [Mts. of N. and W. China]; *David, N. Arch. Mus. Bull.* iii. p. 37 (1867) [Ta-Tchio-Chan, Jéhol, Oulachan]; *Gray, List Gallinæ Brit. Mus.* p. 31 (1867); *Gould, B. Asia*, vii. pl. 24 (1869); *Gray, Hand-l. B.* iii. p. 259 (1870); *Swinh. P. Z. S.* 1871, p. 399 [N.W. China]; *David, N. Arch. Mus. Bull.* vii. p. 11 (1871) [Pekin, Mongolia, Sze-chuen]; *Swinhoe, P. Z. S.* 1872, p. 550 [Mantchuria to Sze-chuen]; *Elliot, Mon. Phas.* i. pl. 30 (1872); *Sclat. Ibis*, 1874, p. 169; *David & Oustal. Ois. Chine*, p. 407, pl. 104 (1877) [Mantchouria to E. Thibet]; *Seebohm, Ibis*, 1891, p. 380 [W. Sze-chuen].
Pucrasia davidiana, *Milne-Edw. N. Arch. Mus. Bull.* i. p. 14 (1865).
Pucrasia xanthospila, var. ruficollis, *David & Oustal. Ois. Chine*, p. 408 (1877) [Shen-se].
? Pucrasia meyeri, *Oustal. Ann. Sci. Nat.* (7) xii. p. 316 (1892) [Tâ-tsién-loù].

Adult male. In general appearance resembles the male of *P. macrolopha*, but the disposition of the colours on the upper parts, sides, and flanks is reversed, the shaft-stripes and margins of each feather being grey and divided from one another on each side by a black band; the wing-coverts are similarly but less regularly marked, and

the shaft-stripes are mostly buff; there is a rufous-buff nuchal collar, each feather with a pale buff shaft-stripe; the longer upper tail-coverts and centre pair of tail-feathers are pale grey with a triple black, chestnut, and black submarginal stripe down each side; the rest of the tail-feathers are pale grey tipped with white, with a wide black subterminal band and two or three regular black bands across the basal part.

Adult female has the tail-feathers, with the exception of the centre pair, like those of the adult male, otherwise the plumage resembles that of *P. macrolopha*.

Hab. Mountains of N.W. China, extending into Mantchouria and Eastern Thibet.

a, b. ♂ ♀ ad. sk.	Mts. N.W. of Pekin.	Hon. Sir F. W. A. Bruce, K.C.B. [P.]. (Types of the species.)
c. ♂ ad. sk.	Kansu, Jan.	M. Berezowsky [C.].
d. ♂ ad. sk.	Ta-chien-lu (*Pratt*).	H. Seebohm, Esq. [P.].

6. Pucrasia darwini.

Pucrasia darwini, *Swinh. P. Z. S.* 1872, p. 552 [Che-kiang]; *Elliot, Monogr. Phas.* i. pl. 30 bis (1872); *Gould, B. Asia*, vii. pl. 25 (1875); *David & Oustal. Ois. Chine*, p. 409 (1877) [Che-kiang and Fokien]; *Styan, Ibis*, 1891, pp. 329, 499 [Lower Yangtse Basin].

Adult male. Like *P. xanthospila*, but there is no rufous-buff nuchal collar and all the feathers of the sides and flanks, though similarly marked with black, have the ground-colour pale reddish buff instead of grey, and the grey basal parts of the outer tail-feathers, though not barred with black, are margined with that colour on both webs, and there is also a partial shaft-streak of the same.

Adult female resembles the female of *P. xanthospila*, but the black bars across the grey basal part of the outer tail-feathers are incomplete and only represented by a black spot on the shaft.

Hab. Mountains of Eastern China, Ngan-whi, Che-kiang, and Fo-kien.

a. ♂ ad. sk.	Ningpo, Dec. (*R. Swinhoe*).	H. Seebohm, Esq. [P.].

34. CATREUS.

	Type.
Catreus, *Cab. Ersch u. Grub. Encycl.* sec. 1, liii. p. 221 (1851)	C. wallichii.
Lophophasianus, *Reichenb. Nat. Syst. Vög.* p. xxix (1852)	C. wallichii.

Tail composed of 18 feathers, the centre pair very long, about five times as long as the outer pair.

1st primary shorter than the 10th, 5th is slightly the longest.

A long full occipital crest, less marked in the female.

Male with a pair of strong spurs, sometimes represented in the female by blunt warts.

Range. Himalayas; extending eastwards as far as Katmandu in Nepal and west to Chamba.

1. Catreus wallichii.

Phasianus wallichii, *Hardwicke, Tr. Linn. Soc.* xv. p. 166 (1827) [Almorah Hills]; *Hodgs. in Gray's Zool. Misc.* p. 85 (1844); *id. Icon. ined. in Brit. Mus., Gall.* pl. 12 bis, nos. 76–78; *Gray, List of B.* pt. iii. *Gall.* p. 24 (1844); *id. Gen. B.* iii. p. 497 (1845); *id. Cat. Hodgs.* ed. 1, p. 124 (1846); *Hutton, J. As. Soc. Beng.* xvii. pt. 2, p. 695 (1848); *Blyth, Cat. Mus. As. Soc.* p. 245 (1849); *Adams, P. Z. S.* 1858, p. 499 [W. Himalayas]; *Mitch. P. Z. S.* 1858, p. 544, pl. 147. fig. 1, & pl. 149. fig. 4; *Irby, Ibis*, 1861, p. 235 [Kumaon]; *Jerd. B. Ind.* iii. p. 527 (1863); *Sclat. List of Phas.* p. 5 (1863); *Gray, List Gallinæ Brit. Mus.* p. 28 (1867); *Tytler, Ibis*, 1868, p. 203 [Simla to Mussooree]; *Beavan, Ibis*, 1868, p. 380 [Simla]; *Gray, Hand-l. B.* ii. p. 258 (1870); *Elliot, Monogr. Phas.* ii. pl. x. [text] (1872); *Hume, N. & E. Ind. B.* p. 524 (1873); *Marsh. B. Nest. Ind.* p. 59 (1877); *Hume & Marsh. Game B. Ind.* i. p. 169, pl. (1878); *Scully, Str. F.* viii. p. 345 (1879) [Nepal]; *Marsh. Ibis*, 1884, p. 423 [Chamba]; *Oates, ed. Hume's Nests & Eggs*, iii. p. 412 (1890).

Lophophorus wallichii, *Less. Man. d'Orn.* ii. p. 179 (1828); *Griff. ed. Cur.* iii. p. 15 (1829); *Vigne, P. Z. S.* 1841, p. 6 [Chamba].

Phasianus st ceii, *Vig. Phil. Mag.* 1831, p. 232; *id. P. Z. S.* 1831, p. 35.

Catreus wallichii, *Gould, Cent. B. Himal.* pl. 68 [text] (1832); *id. B. Asia*, vii. pl. 18 (1865).

Adult male. Top of the head blackish brown, each feather, especially the longer ones of the crest, tipped with dirty white; back of the head grey; neck white, barred on the nape with black; mantle barred with black and pale creamy white, each feather fringed with whitish grey and with a subterminal blackish band glossed with dark green; wing coverts and scapulars like the mantle, but the black bars, except the subterminal one, are broken up and irregular and the ground-colour ochraceous buff; lower back and rump rust-colour, each feather with a subterminal black band glossed with green; quills and primary-coverts brownish black, irregularly edged and mottled with buff; feathers of the cheek below the naked patch and ear-coverts brown; chin, throat, and chest dirty white; breast and sides of the belly whitish buff, barred with black; middle of the belly black; flanks, vent, and under tail-coverts ochraceous rust-colour; upper tail-coverts and centre pair of tail-feathers whitish buff, with wide irregular black bars as wide as the interspaces, rest of the tail-feathers the same, but the bars on the inner webs at least are mostly dark chestnut. Bill pale horny brown; naked skin round the eye scarlet; legs and feet grey-brown. Total length 54 inches, wing 10, tail 20·5, tarsus 2·9.

Immature males differ from the adult in having the breast and sides of the belly almost devoid of black markings and washed with bright buff; the black subterminal bars on the upper parts, especially on the lower back and rump, where they are often absent, not glossed with green; and the spurs are rudimentary.

Adult female. Differs chiefly from the male in having the feathers of the head and crest edged with buff; the upper parts of the mantle pale chestnut, widely barred and marked with black; the lower back and rump a mixture of dirty brown, black, and buff, the former predominating; the quills regularly barred, those on the

outer web buff, on the inner pale chestnut; neck and chest black edged with pale buff; breast and belly rufous chestnut edged with buff, more or less mottled on the sides with black; rest of underparts buff mottled with black, and the tail-feathers brownish or reddish brown, irregularly mottled and barred with black and buff except the two outer pairs, which are mostly pale buff slightly mottled with black. Total length 30 inches, wing 8·9, tail 15·5, tarsus 2·6.

Hab. Same as that of the genus.

a, b. ♀ ad. sk.	N.W. Himalayas.	Capt. Stackhouse Pinwill [P.].
c. ♂ imm. sk.	Himalayas, Nov.	India Museum [P.].
d–f. ♂ ♀ ad. sk.	Himalayas.	Maj.-Gen. Hardwicke [P.]. (Types of the species.)
g. ♀ ad. sk.	Himalayas.	Ronald Ferguson, Esq. [P.].
h. ♂ imm. st.	Himalayas.	J. Bax, Esq. [P.].
i. ♂ ad. sk.	Kooloo, June.	Hume Coll.
j–v. ♂ ♀ ad. et imm. sk.	Koteghur, March, Apr., Oct., Dec.	Hume Coll.
w–g′. ♂ ♀ ad. et imm. sk.	Bhagirati Valley.	Hume Coll.
h′. ♂ ad. sk.	Kumaon.	Hume Coll.
i′–l′. ♂ imm., ♀ ad. sk. et ♂ imm. st.	Nepal.	B. H. Hodgson, Esq. [P.].
m′, n′. Skeletons.		
o′. Imperfect skel.	Nepal.	B. H. Hodgson, Esq. [P.].

Hybrid between T. temmincki *and* C. wallichi. *See* p. 276.

Hybrid between Catreus wallichi *and* Phasianus colchicus.

a. ♂ ad. sk.	England.	Gould Coll.

35. PHASIANUS.

	Type.
Phasianus, *Linn. S. N.* i. p. 270 (1766)	P. colchicus.
Syrmaticus, *Wagl. Isis*, 1832, p. 1229	P. reevesi.
Graphephasianus, *Reichenb. Nat. Syst. Vög.* p. xxix (1852)	P. sœmmerringi.
Calophasis, *Elliot, Monogr. Phas.* i. pl. xiii bis or pt. iv. (1872)	P. ellioti.

*Tail composed of 16 or 18 feathers, long and wedge-shaped, the middle pair being much longer than the outer pair.

The first primary is about equal to the 8th and considerably longer than the 10th.

Sides of the head naked; no crest, but the ear-tufts are considerably lengthened in the male.

Tarsi in male provided with a pair of spurs.

Range. South-eastern Europe; across Central Asia; Japan; Formosa.

* In *P. humiæ* and *P. ellioti* there are only 16 tail-feathers, all the other species have 18.

Key to the Species.

1. Crown green or greenish bronze.
   A. General colour of the lower back, rump, and upper tail-coverts maroon or rufous sometimes glossed with green; the dark bands on the basal part of the central pair of tail-feathers narrower.
      a. Without a white ring round the neck or with only traces of one.
         a'. Wing-coverts reddish or sandy brown.
            a''. Middle of breast and sides of belly rich dark green; feathers of the chest and upper breast without marginal bands. *tarimensis*, p. 327.
            b''. Middle of breast and sides of belly dark purplish green; chest and upper breast with wide tips of rich purple. *colchicus*, p. 320.
            c''. Middle of breast and sides of belly purplish lake, chest and upper breast with narrow purple margins ..... *talischensis*, p. 324.
         b'. Wing-coverts white or nearly white.
            d''. Middle of breast and sides of belly purplish carmine.
               a'''. Rump and upper tail-coverts washed with purplish lake; breast-feathers narrowly margined with purplish black ..... *persicus*, p. 324.
               b'''. Rump and upper tail-coverts orange-red; breast-feathers widely tipped with purplish red-bronze.
                  a^4. Scapulars edged with dark purplish green ..... *principalis*, p. 325.
                  b^4. Scapulars not edged with dark purplish green ..... *zerafshanicus*, p. 326.
            e''. Middle of breast and sides of belly dark green.
               c'''. Flanks moderately tipped and feathers of the mantle very narrowly edged on the sides with purplish green ..... *shawi*, p. 326.
               d'''. Flanks tipped and feathers of the mantle broadly edged with rich green ..... *chrysomelas*, p. 327.
      b. With a wide white ring round the neck.
         c'. Chest glossed with purple; white ring more or less complete ..... *mongolicus*, p. 328.
         d'. Chest glossed with green; white ring incomplete in front ..... *semitorquatus*, p. 329.
   B. General colour of the lower back, rump, and upper tail-coverts greenish slate or slate; black bars on the basal part of the middle tail-feathers wider.
      c. Underparts with more or less fiery copper-red in the plumage.
         e'. No white ring round the neck.
            f''. Chest mostly dark green.

e'''. Scapulars Indian red; submarginal green bands on the rump-feathers wider ..... *elegans*, p. 329.

f'''. Scapulars sandy red; submarginal green bands on the rump-feathers narrower ..... *vlangali*, p. 330.

g'. Chest fiery orange-red.

g'''. Middle of the breast and sides of the belly dark green; flank-feathers orange-red ..... *strauchi*, p. 330.

h'''. Middle of the breast and sides of the belly slightly glossed with purplish green; flank-feathers buff. *decollatus*, p. 331.

f'. A white ring round the neck.

h''. Ground-colour of mantle and flanks yellowish buff.

i'''. Scapulars margined with Indian red ..... *torquatus*, p 331.

k'''. Scapulars margined with sandy brown ..... *satscheunensis*, p. 333.

i''. Ground-colour of mantle and flanks pale primrose ..... *formosanus*, p. 333.

d. Underparts dark green, on copper-red in the plumage ..... *versicolor*, p. 334.

II. Crown reddish brown or chestnut.

C. Lower back black, margined and barred with white.

e. Sides of neck and belly white ..... *ellioti*, p. 335.

f. Sides of neck steel-blue; belly chestnut .. *humiæ*, p. 335.

D. Lower back maroon.

g. Margined on the sides of the feathers with fiery gold ..... *sœmmerringi*, p. 336.

h. Margined on the sides of the feathers with white..... *scintillans*, p. 337.

III. Crown of the head white ..... *reevesi*, p. 337.

1. Phasianus colchicus.

The Pheasant, *Albin, Nat. Hist. B.* i. p. 14, pls. 25, 26 (1738); *Selby, Brit. Orn.* i. pt. ii. pl. 57 (1833).

Le Faisan, *Briss. Orn.* i. p. 262 (1760); *D'Aubent. Pl. Enl.* pls. 121, 122; *Buff. Hist. Nat. Ois.* ii. p. 328, pl. xi. (1771).

Phasianus colchicus, *Linn. S. N.* i. p. 271 (1766); *Gmel. Nov. Comm. Ac. Petr.* xv. p. 451 (1771); *Gm. S. N.* i. pt. ii. p. 741 (1788); *Lath. Ind. Orn.* ii. p. 629 (1790); *Bonnat. Tabl. Encycl. Méth.* i. p. 183, pl. 87. fig. 4 (1791); *Meyer & Wolf, Tasch. der deutsch. Vög.* i. p. 291, pl. (1810); *Pall. Zoogr. Rosso-Asiat.* ii. p. 83 (1811); *Temm. Pig. et Gall.* ii. p. 289 (1813), iii. p. 666 (1815); *id. Man. d'Orn.* p. 282 (1815); *Vieill. N. Dict. d'Hist. Nat.* xi. p. 29 (1817); *Steph. in Shaw's Gen. Zool.* xi. p. 222, pl. 13 [hybrid] (1819); *Temm. Man. d'Orn.* ii. p. 453 (1820); *Roux, Orn. Prov.* p. 47, pls. 262, 263 (1825); *Vieill. Faun. Franç.* p. 247, pl. 107. figs. 1 & 2 (1828); *Werner, Atl. Ois. d Eur.* Ord. 10, pls. i. & ii. (1828); *Cuv. Règ. Anim.* i. p. 477 (1829); *Griff. ed. Cuv.* iii. p. 22 (1829); *Less. Traité d'Orn.* p. 495 (1831); *Montagu, Orn. Dict.* ed. 2, p. 367 (1831); *Ménétr. Cat. Rais.* p. 46 (1832) [Caucasus]; *Selby, Ill. Brit. Orn.* i. p. 417, pl. lvii. (1833); *Naum. Nat. Vög. Deutschl.* vi. p. 432, pl. 162 (1833); *Schinz, Nat. Abbild. Vög.*

p. 249, pl. 95 (1833); *Macgill. Brit. B.* i. p. 114 (1837); *Gould, B. Eur.* pl. 247 (1837); *Bonap. Comp. List*, p. 42, no. 285 (1838); *Schinz, Europ. Faun.* i. p. 277 (1840); *Dèmid. Voy. Russ. Mérid.* iii. p. 217 (1840); *Keys. u. Blas. Wirbelth.* p. lxiv (1840); *Crespon. Gard*, p. 321 (1840); *Yarrell, Brit. B.* ii. p. 277, woodcut (1843); *Gray, List B.* pt. iii. *Gall.* p. 23 (1844); *Schl. Rev. Crit. Ois. d'Eur.* p. lxxiv (1844); *Mühle, Beitr. Orn. Griechenl.* p. 85 (1844); *Brandt, Bull. Acad. St. Pétersb.* iii. p. 50 (1844) [Caucasus Pr.]; *Gray, Gen. B.* iii. p. 497 (1845); *Blyth, Cat. B. Mus. As. Soc.* p. 246 (1849); *Degl. Orn. Europ.* ii. p. 40 (1849); *Thompson, N. H. Irel.* ii. p. 19 (1850); *Watters, N. Hist. B. Irel.* p. 123 (1853); *Schinz, Nat. Vög.* p. 148, pl. 71 (1853); *Brehm, Vogelfang*, p. 265 (1855); *Powys, Ibis*, 1860, p. 237 [Albania, Salonika]; *Sclat. List Phas.* p. 4 (1863); *id. P. Z. S.* 1863, p. 116; *Fitz. Atl. Nat., Vög.* fig. 227 (1864); *Filippi, Viagg. Pers.* i. p. 350 (1865); *More, Ibis*, 1865, p. 425; *Gray, List Gallinæ Brit. Mus.* p. 26 (1867); *Dawkins, Ibis*, 1869, p. 358; *Gould, B. Asia*, vii. pl. 34 (1869); *Elliot, P. Z. S.* 1870, p. 408; *Hutton, Ibis*, 1870, p. 397 [N. Zealand]; *Elwes & Buckl. Ibis*, 1870, p. 329 [Turkey]; *Gray, Hand-l. B.* ii. p. 257 (1870); *Gray, B. West Scotl.* p. 224 (1871); *Elliot, Monog. Phas.* ii. pl. 2 [text] (1872); *Saunders, Ibis*, 1872, p. 81 [Sicily]; *Taylor, Ibis*, 1872, p. 231 [Crimea]; *Severtz. Bull. Mosc.* xlviii. pt. 3, p. 208 (1875); *Danford & Brown, Ibis*, 1875, p. 418 [Transylvania]; *Jesse, Ibis*, 1876, p. 382 [Corsica]; *Dress. B. Eur.* vii. p. 85, pl. 469 (1879); *Booth, Rough Notes*, ii. 3 pp. (1881–7); *Giglioli, Ibis*, 1881, p. 206; *Seebohm, Ibis*, 1882, p. 220 [Astrakhan]; *id. Ibis*, 1883, p. 27 [Caucasus]; *Bogd. Consp. Av. Ross.* i. p. 19 (1884); *Radde, Orn. Caucas.* p. 367 (1884); *Whitehead, Ibis*, 1885, p. 41 [Corsica]; *Giglioli, Av. Ital.* p. 334 (1886); *Tegetm. P. Z. S.* 1886, p. 81 [Transcaucasia]; *Schneider, Ornis*, 1887, p. 537 [Upper Rhine Valley]; *Radde, Ornis*, 1887, p. 496 [Caucasus]; *Salvad. El. Uec. Ital.* p. 195 (1887); *Seebohm, Ibis*, 1887, pp. 169, 170, 288; *Gurney, Ibis*, 1888, p. 227; *Giglioli, Av. Ital.* pt. i. p. 515 (1889); *Saund. Ill. Man. Brit. B.* p. 485 (1889); *Radde u. Walt. Ornis*, 1889, p. 90 [Transcaucasia]; *Dubois, Ornis*, 1890, p. 327 [Belgium]; *Radde, Ornis*, 1890, p. 413 [Caucasus]; *Altum, J. f. O.* 1891, p. 130.

Common Pheasant, *Lath. Gen. Syn.* ii. pt. ii. p. 712 (1783); *id. Gen. Hist.* viii. p. 187 (1823).

Phasianus marginatus, *Wolf & Meyer, Tasch. Deuts.* i. p. 291, pl. (1810).

Phasianus colchicus septentrionalis, *Lorenz, J. f. O.* 1888, p. 572 [N. Caucasus].

Adult male. Top of the head bronze-green; forehead, back and base of the neck, chin and throat dark green, shading into purple on the sides and front of the neck; mantle fiery orange, each feather with a narrow W-shaped margin of dark purplish green; feathers of the scapulars and interscapulary region mottled with black and buff in the middle and surrounded by consecutive bands of buff, black, and orange-red, roughly parallel with the margin of the feather, which has the tip glossed with purplish lake; lower back *,

* It is very rarely now that anything approaching a pure-bred male of *P. colchicus* can be found in England; even in specimens which appear to be pure bred at the first glance (that is, in those which have no trace of a white ring), the subterminal green bar of *P. torquatus* is usually more or less developed on the feathers of the lower back, and the basal part of the central tail-feathers is rather widely barred with black.

rump, and upper tail-coverts rufous buff, mottled with black and widely tipped with red, glossed with purplish lake; lesser and median wing-coverts reddish sandy brown, the inner ones edged with red. Quills, greater coverts, and bastard-wing light brown, barred and mottled with whitish buff, the outer webs of the secondaries shading into buff towards their margins; chest, breast, and flanks fiery orange-red, each feather with a rich purple margin; middle of breast and sides of belly glossed with dark purplish green; rest of underparts dark brown mixed with rufous, especially on the under tail-coverts. Centre pair of tail-feathers light olive-brown in the middle and widely edged on each side with rufous glossed with purplish lake; a series of wide-set black bars across the olive-brown central band, narrow on the basal part and increasing in width towards the extremity; outer pairs similar, but shading into blackish brown towards the margins of the inner web. Bill whitish horn; legs and feet brownish horn-colour; naked skin on the sides of the face and wattles, when present, scarlet-vermilion. Total length 37·5 inches, wing 10·1, tail 21·2, tarsus 2·8.

Immature males resemble the adult, but the plumage is less pure and bright and the tail is shorter.

Adult female. Top of the head black, each feather edged with sandy brown and tipped with black; back and sides of the neck the same, but the feathers have a slight pinkish tinge and a glossy crimson and purple line across the tip; mantle and sides of the breast chestnut, with black centres and pale pinkish-white margins mottled with black; rest of the upper parts black, orange-brown towards the tips and margined with sandy brown mixed with buff. Quills as in the male, but the barring and mottling, especially on the outer webs of the secondaries, is much coarser; an elongate patch of white black-tipped feathers below the eye; chin and throat pale rufous buff; chest and upper breast much the same as the mantle, but the basal parts are almost entirely hidden by the sandy-pink tips; flanks barred with black and buff in the middle and edged with pale buff; rest of underparts pale buff, finely vermiculated with dusky brown. Middle pair of tail-feathers reddish brown down the middle, shading into sandy olive on the sides and with wide irregular bars of black, buff, and black; outer pair very similar. Total length 24·5 inches, wing 8·6, tail 11·5, tarsus 2·4.

Hab. Southern Turkey, Greece, Asia Minor to Transcaucasia, extending northwards to the Volga.

a. ♂ ad. sk.	Erzeroom, Turkey.	Gould Coll.
b. ♂ ad. sk.	R. Rion, Mingrelia, Transcaucasia.	Hon. W. Rothschild [P.].
c, *d*. ♂ ♀ ad. sk.	Caucasus.	Purchased.
e. ♂ ad. sk.	Terski, Ciscaucasia, Feb.	St. Petersburg Museum [E.].
f. ♀ ad. sk.	Astrakhan, June.	St. Petersburg Museum [E.].

g. ♂ ad. sk.	Gulf of Salonika, Greece.	Gould Coll.
h, i. ♂ ♀ ad. sk.	Bohemia.	Lord Ampthill [P.].
j, k. ♂ ad. sk.*	Argyllshire, Dec.	F. M. Ogilvie, Esq. [P.].
l–n. ♂ ♀ ad. sk.*	Northumberland.	Gould Coll.
o, p. Pull. st.	Cambridgeshire.	Purchased.
q, r. ♀ ad. st. assuming male plumage.	Norfolk.	Dr. Hamilton [P.].
s. ♀ ad. st. assuming male plumage.	Norfolk.	George Roper, Esq. [P.].
t. ♂ ad. st.	Norfolk.	Purchased.
u, v. ♂ ♀ ad. st. [pale var.].	Suffolk, Nov.	T. Harcourt Powell, Esq. [P.].
w. ♀ ad. st. [pale var.].	Suffolk.	Rev. R. Wilson [P.].
x. ♂ ad. st. [albino var.].	Buckinghamshire.	G. C. Norman, Esq. [P.].
y, z. ♂ ♀ ad. st.	Hampshire.	G. B. Tyndale, Esq. [P.].
a'. ♂ ad. st.	Tortworth Court, Glos.	Earl of Ducie [P.].
b'. ♂ ad. sk.*	Gloucestershire, Jan.	H. J. Elwes, Esq. [P.].
c'. ♀ ad. st. assuming male plumage.	England.	Sir J. Trevelyan [P.].
d'. ♂ ad. st. [pale var.].	England.	
e'–g'. Pull. st.	England.	Dr. Günther [P.].
h'. ♂ ad. st.	England.	
i'. ♂ ad. st. [var.].	England.	
k'. ♂ ad. st. [semi-albino var.].	England.	J. Lupton, Esq. [P.].
l'. ♀ ad. st.	England.	T. Hodges, Esq. [P.].
m', n'. ♀ ad. sk.	England.	Hume & Tweeddale Colls.
o', p'. ♂ ad. sk. [pale var.].	England.	Tweeddale & Gould Colls.
q'. ♀ ad. sk. [pale var.].	England.	F. Bond, Esq. [P.].
r'. ♂ ad. sk. [albino var.].	England.	
s', t'. ♀ ad. sk. in male plumage.	England.	T. Hodges, Esq. [P.].
u'. ♀ ad. sk. in male plumage.	England, Nov.	J. H. Gurney, Esq. [P.].
v'. ♀ ad. sk. in male plumage.	England.	Rev. T. Cobell [P.].
w', x'. Skeletons.	Germany.	Dr. Günther [P.].
y'–a''. Sterna.		

Hybrid between Phasianus colchicus *and* P. torquatus.

a. ♂ ad. sk.	[England.]	Gould Coll.
b. ♂ ad. sk.	[England.]	Hume Coll.
c. ♂ ad. sk.	Argyllshire, Dec.	F. M. Ogilvie, Esq. [P.].
d, e. ♂ ♀ ad. sk.	Hampshire.	Lady Featherstonhaugh [P.].

* These male specimens are not quite pure bred, and traces of the subterminal green bars may be seen on the rump-feathers.

Hybrid between P. colchicus *and* P. versicolor.

a,b. ♂ ad. sk. (1st cross). *c.* ♂ ad. sk. (2nd cross). *d.* ♂ ad. sk. (3rd cross).	England.	Gould Coll.
e, f. ♂ ♀ ad. st.	England.	Gould and Zool. Soc. Colls.

Hybrid between P. colchicus *and* P. reevesi.

a. ♂ ad. st.	Suffolk, Dec.	Lord Lilford [P.].
b–e. ♂ imm. et pull. st.		Zool. Soc. Coll.

Hybrid between P. colchicus *and* Chrysolophus pictus.

a. ♀ ad. st.	England.	Dr. Thackeray [P.].
b. ♂ ad. st.	England.	Zool. Soc. Coll.
c. ♂ ad. st.	England.	Purchased.
d. Skeleton.		

Hybrid between P. colchicus *and* Gallus domesticus (*Spanish Fowl*).

a, b. Ad. sk. et st.	England.	Mr. E. Bartlett [C.].

Hybrid between Catreus wallichi *and* Phasianus colchicus. *See* p. 318.

Hybrid between Gennæus muthura *and* Phasianus colchicus. *See* p. 302.

Subsp. *a.* Phasianus talischensis.

? Phasianus colchicus, *Blanf. E. Persia*, ii. p. 272 (1876) [Mazandarán and Gurgán].
Phasianus persicus talischensis, *Lorenz, J. f. O.* 1888, p. 571 [Talisch].
Phasianus colchicus, *Radde & Walt. Ornis*, 1889, p. 90 [Talisch.]

Adult male. Differs from typical *P. colchicus* and resembles *P. persicus* in having the middle of the breast amd sides of the belly purplish carmine and the chest and upper breast narrowly margined with purple. It differs from *P. persicus* and resembles *P. colchicus* in the colour of the wing-coverts, which are reddish sandy brown instead of nearly white.

Adult female. Does not differ from the female of *P. colchicus*.

Hab. Talisch, south-west shore of the Caspian Sea. It is probably also the bird that extends through Mazandarán to the Gurgan River.

a, b. ♂ ♀ ad. sk.	Alazan River, Transcaucasia.	St. Petersburg Museum [E.].

2. Phasianus persicus.

Phasianus persicus, *Severtz. Bull. Mosc.* xlviii. pt. 3, p. 208 (1875) [S.E. Caspian]; *id. J. f. O.* 1875, p. 225; *id. Ibis*, 1875, p. 495; *Bogd. Consp. Av. Ross.* i. p. 19 (1884) [Ashourada & Peninsula of

Potemkine]; *Seebohm, Ibis*, 1887, p. 170; *Menzb. Ibis*, 1887, p. 302 [Atrak, Sumbar, & Chandir Rivers]; *Sharpe, Tr. Linn. Soc.* (2) *Zool.* v. p. 86 (1889) [Bauder-i-ghaz]; *Radde & Walt. Ornis*, 1889, pp. 89–96, 170, 180 [Transcaspia]; *Zaroudn. Bull. Mosc.* 1889, p. 812.

Phasianus shawi, *Elliot, Ibis*, 1876, p. 132.

Adult male. Resembles *P. colchicus* in general plumage and in having the lower back, rump, and upper tail-coverts glossed with purplish lake. It differs in having the lesser and median wing-coverts nearly white; the black bars on the tail scarcely half as wide; the chest and breast-feathers glossed with purplish lake and their dark purple margins much narrower, and the middle of the breast and sides of the belly purplish carmine. Total length 35 inches, wing 9·3, tail 19·5, tarsus 2·8.

Adult female. Closely resembles the female of *P. colchicus*.

Hab. Valleys of Atrak, Sumbar, and Chandir Rivers, South-east Caspian, Ashourada Is., and the peninsula of Potemkine.

a. ♂ ad. sk.	Atrak R., Transcaspia, March.	Purchased.
b. ♀ ad. sk.	Sumbar R., Transcaspia (*Grum-Grzimailo*).	St. Petersburg Museum [E.].
c. ♂ imm. sk.	Astrabad Market, Oct. (*Aitchison*).	Afghan Delim. Com. [P.].

3. Phasianus principalis.

Phasianus principalis, *Sclat. P. Z. S.* 1885, p. 322, pl. xxii. [Bala Murghab, N.W. Afghanistan], 1887, p. 502; *Menzb. Ibis*, 1887, p. 301 [Murghab, Tejend, & Dushak Rivers, & Kaakuk Dist.]; *Scully, M. & B. N. Afghan.* p. 86 (1887); *Seebohm, Ibis*, 1887, p. 171; *Sclat. Ibis*, 1889, p. 584 [Upper Murghab]; *Sharpe, Tr. Linn. Soc.* (2) *Zool.* v. p. 86, pl. vii. (1889); *Radde & Walt. Ornis*, 1889, pp. 89, 90, 170, 180; *Zaroudn.** *Bull. Mosc.* 1889, p. 813, 1890, p. 309 [Streams from Daragez & Kalat Mts.].

Phasianus komarowii, *Bogd. Bull. Pétersb.* xxx. p. 356 (1886) [Aschabad]; *id. Mél. Biol.* xii. p. 319 (1886); *Zaroudn. Bull. Mosc.* lxi. p. 322 (1886) [Tchirin-Ichai & Kizil-Kan, tributaries of Atrek R.].

Adult male bears the same relationship to *P. persicus* that *P. chrysomelas* bears to *P. shawi*. It differs from the former in having no purple-lake gloss on the lower back, rump, and upper tail-coverts, which are orange-red, the chest and breast widely tipped with purplish-red bronze, and the flank-feathers widely tipped with dark greenish purple. Total length 35·5 inches, wing 9·4, tail 21·5, tarsus 2·7.

Adult female very similar to the female of *P. chrysomelas*.

Hab. North-western Afghanistan and North-east Persia.

* Zaroudnoï says that specimens of *P. principalis* from Tejend River differ from the Murghab birds in having the feathers of the sides and flanks tipped with greenish blue instead of purplish blue, thus showing an approach to *P. chrysomelas* from the Amu Darya.

a. ♂ ad. sk.	Bala-Murghab, Feb. (*Aitchison*).	Afghan Delim. Comm. [P.].
b. ♀ ad. sk.	Karaol-Khana, Feb. (*Aitchison*).	Afghan Delim. Comm. [P.].

4. Phasianus zerafshanicus.

Phasianus zerafshanicus, *Tarnovski, Field*, lxxvii. p. 409 (1891).
Phasianus klossovskii, *Tarnovski, Field*, lxxvii. p. 409 (1891).
Phasianus tarnovskii, *Seebohm, P. Z. S.* 1892, p. 271 [Zarafshan Valley].

Adult male very closely allied to the male of *P. principalis*, but the scapulars are *not* margined with dark greenish purple, and the breast-feathers have narrow heart-shaped purplish margins.

Hab. Zarafshan Valley.

5. Phasianus shawi.

Phasianus shawi, *Elliot, P. Z. S.* 1870, p. 403 [Yarkand]; *id. Monog. Phas.* ii. pl. i. [text] (1872); *Scully, Str. F.* iii. p. 433 (1875), iv. pp. 75, 80, 83, 179 (1876) [Kashgar, Beshkant, Yarkand]; *Gould, B. Asia*, vii. pl. 35 (1876); *Seebohm, Ibis*, 1887, p. 171; *id. P. Z. S.* 1888, p. 415 [Aksu & Khotan-Darya]; *Sharpe, Sec. Yark. Miss., Aves*, p. 120 (1891) [Guma, Yarkand, Marálbáshi].
Phasianus insignis, *Elliot, P. Z. S.* 1870, p. 404 [Yarkand]; *id. Monog. Phas.* ii. pl. iii. [text] (1872); *Scully, Str. F.* iii. p. 433 (1875).
Phasianus chrysomelas, *Elliot, Str. F.* v. p. 198 (1877).

Adult male. Differs chiefly from *P. colchicus* in having the lesser and median wing-coverts white or whitish buff; the lower back and rump and upper tail-coverts without any purplish-lake gloss, and the feathers of the two former with a subterminal green spot on each side of the shaft; the chest and breast-feathers edged with dark green, and the middle of the breast and sides of the belly dark green. It is distinguished from *P. chrysomelas* by the tips of the flank-feathers being purplish green instead of green, and the much narrower margins to the feathers of the chest, breast, and mantle. Total length 33·5 inches, wing 9·6, tail 19·5, tarsus 2·7.

Adult female. Much paler than the female of *P. colchicus*; no chestnut on the feathers of the mantle, of which the ground-colour is pale rufous-buff; the ground-colour of the rest of the plumage is whitish buff. Total length 23·4 inches, wing 8·3, tail 11·2, tarsus 2·3.

Hab. Valleys of the Yarkand, Kashgar, Aksu, and Khotan Rivers.

a, b. ♂ ♀ ad. sk.	Kashgar (*Dr. Bellew*).	India Museum [P.].
c, d. ♂ ♀ ad. sk.	Maralbashi, Jan. (*J. Biddulph*).	Hume Coll.
e. ♂ ad. sk.	Maralbashi, Jan. (*J. Biddulph*).	India Museum [P.].
f–h. ♂ ♀ ad. sk.	Yarkand, March.	Hume Coll.
i. ♀ ad. sk.	Yarkand, Feb. (*J. Scully*).	Hume Coll.
k. ♂ ad. sk.*	Beshkant, Feb. (*J. Scully*).	Hume Coll.

* With imperfect white collar.

6. Phasianus tarimensis.

Phasianus shawi, *Prjev.* (*nec Elliot*) *Isvest. Imp. Russ. Geogr. Obsch.* xiii. p. 275 (1877) [Lob-nor].
Phasianus tarimensis, *Prjev. Dritte Reise in Cent. As.* p. 95 (1883); *id. Reisen in Tibet*, p. 59 (1884) [Tarim]; *Pleske, P. Z. S.* 1888, p. 415 (Karaschar to Lob-nor].

Adult male. Very closely allied to the male of *P. shawi*, but differs in having the wing-coverts yellowish brown instead of ashy grey, and the margins of the feathers of the rump and of the upper tail-coverts green and buff instead of orange-red. Total length 30·3 inches, wing 9·3, tail 16·3, tarsus 2·8.

Adult female. Resembles the female of *P. shawi*.

Hab. Ranging from Karaschar along the Tarim Valley to Lob-nor.

a. ♂ ad. sk.	Bagratsch-Kul, near Karaschar, Nov.	St. Petersburg Museum [E.].
b, c. ♂ ♀ ad. sk.	Lob-nor, Feb., Dec. (*Prjevalski*).	St. Petersburg Museum [E.].

7. Phasianus chrysomelas.

Phasianus chrysomelas, *Severtz. Bull. Mosc.* xlviii. pt. 3, p. 207 (1875) [Amu-Darya]; *id. Ibis*, 1875, p. 493 [Lower Amu-Darya]; *id. J. f. O.* 1875, p. 225; *Gould, B. Asia*, vii. pl. 36 (1876); *Bogd. Consp. Av. Ross.* fasc. i. p. 20 (1884) [Amu-Darya]; *Seebohm, Ibis*, 1887, p. 172; *Pleske, Mém. Ac. St. Pétersb.* (7) xxxvi. no. 3, p. 48 (1888) [Kasalinsk].
Phasianus dorrandti, *Severtz. J. f. O.* 1875, p. 225.
Phasianus oxianus, *Severtz. J. f. O.* 1875, p. 225.
Phasianus insignis, *Elliot, Ibis*, 1876, p. 132.

Adult male. Differs from *P. shawi* chiefly in having the feathers of the mantle widely edged with green, the chest, breast, and flanks very widely tipped with the same colour, each of the feathers of the lower back and rump with a triangular green spot at the end of the shaft, and the black lines on the tail-feathers much narrower. Total length 34 inches, wing 9·3, tail 19, tarsus 2·8.

Adult female. Similar to the female of *P. shawi*, but the black spots on the middle of the chest and breast-feathers are more strongly marked. Total length 24 inches, wing 8·3, tail 12·4, tarsus 2·4.

Hab. Valley of the Amu-Darya.

a. ♂ ad. sk.*	Amu-Darya (*Russow*).	St. Petersburg Museum [E.].
b. ♀ ad. sk.	Nukus, Amu-Darya.	St. Petersburg Museum [E.].
c, d. ♂ ♀ ad. sk.	Petro-Alexandrowsk, Amu-Darya, Dec.	Purchased.
e, f. ♂ ♀ ad. sk.*	Amu-Darya, near Bokhara.	Purchased.

* With imperfect white collar, showing traces of interbreeding with *P. mongolicus*.

g. ♀ ad. sk.	Bokhara (*Severtzov*).	Gould Coll.
h. ♂ ad. sk.*	Delta between Karkul R. and Amu-Darya, Oct. (*Severtzov*).	Gould Coll.

Hybrid between P. chrysomelas *and* P. mongolicus.

a. ♂ ad. sk.	Nukus, Amu-Darya, Dec.	Purchased.

8. Phasianus mongolicus.

Phasianus colchicus, *Licht.* (*nec Linn.*) *in Eversm. Reise nach Buchara*, p. 133 (1823) [Kuwan and Jan Darja]; *Meyend. Voy. à Bokhara*, p. 428 (1826).

Phasianus torquatus, *Karelin* (*nec Gmel.*), *Bull. Mosc.* p. 561 (1841).

Phasianus mongolicus, *Brandt, Bull. Acad. St. Pétersb.* iii. p. 51 (1844) [Altai]; *Gould, B. Asia*, vii. pl. 41 (1858); *Sclat. List Phas.* p. 4 (1863); *id. P. Z. S.* 1863, p. 116; *Gray, List Gallinæ Brit. Mus.* p. 27 (1867); *id. Hand-l. B.* ii. p. 257 (1870); *Elliot, P. Z. S.* 1870, p. 408: *id. Monog. Phas.* ii. pl. iv. [text] (1872); *Severtz. Turkest. Jevotn.* p. 68 (1873); *id. Bull. Mosc.* xlviii. pt. 3, p. 208 (1875); *id. J. f. O.* 1875, p. 224; *id. Ibis*, 1875, p. 493; *Dresser, Ibis*, 1876, p. 323; *Finsch, Verh. Ges. Wien*, xxix. p. 241 (1880); *Bogd. Consp. Av. Ross.* fasc. i. p. 20 (1884); *Seebohm, Ibis*, 1887, p. 173; *Pleske, Mém. Ac. St. Pétersb.* (7) xxxvi. no. 3, p. 47 (1888) [Chinaz].

Adult male. Differs from all the maroon and orange-red rumped species in having a wide white ring (interrupted in front) round the neck; otherwise it most nearly resembles *P. persicus*, but the mantle and scapulars, chest and breast are bronze orange-red with purple and green reflections; the feathers of the lower back, rump, and upper tail-coverts are mixed with dark green and glossed with green and purple; the chin and throat are mostly purplish bronze-red; the chest, breast, and flanks are tipped with very dark green; and the middle of the breast and sides of the belly are dark green. Total length 36·5 inches, wing 9·6, tail 22, tarsus 2·8.

Adult female. Resembles the female of *P. chrysomelas*, but on each feather of the upper mantle there is a subterminal black spot, and a bar across the middle instead of a broad black submarginal border. Total length 26 inches, wing 8·5, tail 12·3, tarsus 2·5.

Hab. Ranging from the Valley of the Syr-Darya across the basin of Lake Balkash as far east as Lake Zaisan and the Valley of the Black Irtish, and southwards to the valley of the Ili and Issik-Kul.

a. ♂ ad. sk.	Syr-Darya.	Gould Coll.
b. ♂ ad. sk.	Fort Perovskie, Syr-Darya, Jan.	Purchased.
c–e. ♂ ♀ ad. sk.	Chinaz, Upper Syr-Darya (*Russow*).	St. Petersburg Mus. [E.].
f. ♂ ad. sk.	Tashkend, Upp. Syr-Darya.	Purchased.

* With imperfect white collar, showing traces of interbreeding with *P. mongolicus*.

Subsp. *a*. Phasianus semitorquatus.

Phasianus semitorquatus, *Severtz. Ibis*, 1875, p. 491 [North-east of Kuldja and Ebi-nor].
Phasianus mongolicus semitorquatus, *Pleske, Bull. Acad. St. Pétersb.* xiii. p. 295 (1892) [Prov. of Gutchen and Urumtsi].

Adult male. Differs from the male of *P. mongolicus* in having the mantle, upper tail-coverts, chest, and upper breast glossed with green instead of purple-carmine, and the white ring more widely interrupted across the fore part of the neck.

Adult female. Very similar to the female of *P. mongolicus*.

Hab. Dzungaria: vicinity of Ebi-nor, Kuldja, Urumtsi, and Gutchen.

a. ♂ ad. sk.	Ebi-nor, Dzungaria, Dec. (*Severtzov*).	Purchased.
b, c. ♂ ♀ ad. sk.	Urumtsi, Dzungaria, Dec. (*Pewzow*).	St. Petersburg Mus. [E.].
d. ♂ ad. sk.	[Altai Mountains.]	

9. Phasianus elegans.

Phasianus elegans, *Elliot, Ann. & Mag. N. H.* (4) vi. p. 312 (1870); *Sclat. P. Z. S.* 1870, p. 670 [Yun-ling Mts., W. Sze-chuen]; *Elliot, Monog. Phas.* ii. pl. viii. [text] (1872); *Seebohm, Ibis*, 1888, p. 315.
Phasianus sladeni, *Anders. MS., Elliot, P. Z. S.* 1870, pp. 404, 408; *Anders. P. Z. S.* 1871, p. 214 [W. Yunnan]; *Swinh. P. Z. S.* 1871, p. 398; *David & Oustal. Ois. Chine*, p. 411 (1877) [W. Sze-chuen and W. Yunnan]; *Anders. B. W. Yunnan*, p. 671 (1878) [Momien dist.].

Adult male. This and the following species are at once distinguished from the species of the group including *P. colchicus* and its near allies by the general colour of the lower back, rump, and upper tail-coverts, which are greenish or bluish slate with a rust-coloured patch on each side*, and by the black bars on the basal part of the middle tail-feathers, which are much wider. The feathers of the mantle and scapulars are dark orange-red, rather widely tipped with sandy buff and slightly glossed with green, the upper feathers of the mantle are faintly edged and spotted at the extremity with dark green; the feathers of the lower back and rump with rather wide subterminal dark green bands; the lesser and median wing-coverts greenish grey; the chest, upper and middle parts of the breast, and sides of the belly dark green; otherwise the plumage is very similar to that of *P. colchicus*. Total length 27·5 inches, wing 9·1, tail 14·7, tarsus 2·5.

Adult female. Differs chiefly from the female of *P. colchicus* in having the chin, throat, and fore part of the neck white, and the chest and rest of the underparts barred with irregular black bars; it is scarcely to be distinguished from the female of *P. strauchi*. Total length 21·1 inches, wing 7·9, tail 9·8, tarsus 2·3.

Hab. West Yunnan and Western Sze-chuen.

* Except in *P. versicolor*.

a. ♂ ad. sk.	Sze-chuen.	J. J. Stone, Esq. [P.]. (Type of the species.)
b. ♂ ad. sk.	[Sze-chuen] (*J. R. Reeves*).	Zool. Soc. Coll.

10. Phasianus vlangali.

Phasianus vlangalii, *Prjev. Mongol.* ii. pt. 2, p. 116, pl. xvi. (1876); *id. in Rowley's Orn. Misc.* ii. p. 386 (1877); *id. Reisen in Tibet*, p. 59 (1884) [Tsaidam]; *Seebohm, Ibis*, 1888, p. 315.

*Adult male**. Differs from *P. elegans* chiefly in having the general colour of the mantle and scapulars sandy red, and the sides and flanks golden buff instead of dull orange-red glossed with purple. It is distinguished from *P. strauchi* by its much paler scapulars and by having the chest mostly dark green instead of fiery orange-red. Total length 31·5 inches, wing 9·5, tail 17·5, tarsus 2·6.

Adult female. Upper parts like those of *P. colchicus*, but the black markings are much fainter and the predominating colour is pale buff; the chin and throat are pure white, and the rest of the underparts whitish buff with very faint indications of brown cross-bars. Total length 22·5 inches, wing 8·2, tail 11, tarsus 2·4.

Hab. Tsaidam, south of the Koko-nor Mountains.

a, *b*. ♂ ♀ ad. sk.	Tsaidam, Sept., Nov. (*Prjevalsky*).	H. Seebohm, Esq. [P.].
c, *d*. ♂ ♀ ad. sk.	Tsaidam, Feb., Nov. (*Prjevalsky*).	St. Petersburg Mus. [E.].

11. Phasianus strauchi.

Phasianus strauchi, *Prjev. Mongol.* ii. pt. 2, p. 119, pl. xvii. (1876); *id. in Rowley's Orn. Misc.* ii. p. 417 (1877); *id. Reisen in Tibet*, p. 59 (1884) [Kansu]; *Seebohm, Ibis*, 1888, p. 314; *id. P. Z. S.* 1888, p. 267 (extends S. to Moupin†); *Pleske, Bull. Acad. St. Pétersb.* xiii. p. 296 (1892) [Sining Mountains, Tatung Mts. and River, and Mts. of Amdoa].

Adult male‡. Differs from both *P. elegans* and *P. vlangali* in having the chest and sides of the breast fiery orange-red instead of dark green; from the former it is also distinguished by having the centres of the scapulars whitish buff freckled with black in the middle, and from the latter by the dark Indian-red margins of the scapulars. Total length 36·5 inches, wing 9·4, tail 23·3, tarsus 2·5.

Adult female. Upper parts much like those of *P. colchicus*, but the feathers of the nape and mantle are indistinctly tipped with dark green instead of violet and purple; the underparts are whitish

* In all the specimens examined there are a few feathers at the back of the neck more or less tipped with white.

† I have no doubt that Seebohm is wrong and that the specimens from Moupin in the Paris Museum are correctly identified as *P. decollatus*.

‡ In three of the specimens examined some of the feathers at the back of the neck are tipped or more or less mixed with white.

buff; all the feathers of the chest, breast, sides, and flanks barred with black, the latter slightly glossed with green. Total length 23·4 inches, wing 8·1, tail 12·5, tarsus 2·2.

Hab. North-western Kansu.

a. ♂ ad. sk.	Kansu, May (*Prjevalsky*).	Seebohm Coll.
b, c. ♂ ad. et pull. sk.	Kansu, May, June (*Grum-Grzimailo*).	St. Petersburg Mus. [E.].
d. ♀ ad. sk.	Kansu, March (*Prjevalsky*).	St. Petersburg Mus. [E.].

12. Phasianus decollatus.

Phasianus decollatus, *Swinhoe, P. Z. S.* 1870, p. 135 [Sze-chuen]; *David, N. Arch. Mus. Bull.* vii. p. 11 (1871) [Sze-chuen, Moupin]; *Elliot, Monog. Phas.* ii. pl. vii. [text] (1872); *David & Oustal. Ois. Chine*, p. 411, pl. 100 (1877) [Sin-ling Mts., S. Shen-se, E. Koko-nor*, Moupin, E. Sze-chuen, E. Yunnan, W. Quei-chow]; *Seebohm, Ibis*, 1888, p. 314; *id. Ibis*, 1891, p. 380 [W. Sze-chuen].

Adult male†. Differs chiefly from *P. strauchi* in having the sides and flanks buff instead of orange-red; from *P. torquatus* it may be at once distinguished by having no white ring round the neck, the top of the head dark green instead of pale bronze-green; and the margins to the chest-feathers much wider and dark green instead of purple. Total length 34·5 inches, wing 9·2, tail 18·7, tarsus 2·8.

Adult female. Resembles the female of *P. strauchi*, but the black patches, especially on the scapulars, wing-coverts, and lower back, are larger and more strongly marked; and the chestnut on the upper mantle is darker chestnut. Total length 25 inches, wing 8·1, tail 10·5, tarsus 2·5.

Hab. Western China, ranging from Eastern Yunnan northwards to Eastern Koko-nor [?]: eastwards to the Sin-ling Mountains and southwards to Western Quei-chow.

13. Phasianus torquatus.

Var. *a.* Ring Pheasant, *Lath. Gen. Syn.* ii. pt. ii. p. 715 (1783), *Suppl.* i. p. 208 (1787); *id. Gen. Hist.* viii. p. 190 (1823).

Ring Pheasant, *Hayes, Osterl. Menag.* p. 57, pls. 57, 58 (1794) [Hybrid].

Phasianus torquatus, *Gm. S. N.* i. pt. ii. p. 742 (1788); *Temm. Pig. et Gall.* ii. p. 326 (1813), iii. p. 670 (1815); *Leach, Zool. Misc.* ii. p. 13, pl. 66 (1815); *Vieill. N. Dict. d'Hist. Nat.* xi. p. 38 (1817); *Steph. in Shaw's Gen. Zool.* xi. p. 228 (1819); *Griff. ed. Cuv.* iii. p. 22, pl. (1829); *Guérin-Méneville, Icon. Règ. Anim., Ois.* p. 25, pl. 42. fig. 1 (1829–38); *Less. Traité d'Orn.* p. 495 (1831); *Jard. Nat. Lib., Orn.* iv. p. 189, pl. xiii. (1834) [Hybrid]; *J. E. Gray, Ill. Ind. Orn.* ii. pl. 41. fig. 1 (1834); *G. R. Gray, List B.* pt. iii. *Gall.* p. 23 (1844); *id. Gen. B.* iii. p. 497 (1845); *Blyth, Cat. Mus. As. Soc.* p. 245 (1849); *Gould, B. Asia*, vii. pl. 39 (1856); *Schrenck, Reisen Amur-L.* i. p. 402 (1859); *Swinhoe, Ibis*, 1861,

* Probably the birds from E. Koko-nor should really be referred to *P. strauchi*.

† Several of the males examined show traces of a white ring round the neck.

p. 49 [Hongkong], p. 341 [Pe-chi-li]; *Sclat. & Wolf, Zool. Sket.* l. pl. 37 (1861); *Lamprey, P. Z. S.* 1862, p. 221 [Shanghai]; *Swinh. Ibis*, 1862, p. 259 [Foochow]; *Radde, Ost-Sib.* ii. p. 302 (1863); *Sclat. List Phas.* p. 4 (1863); *id. P. Z. S.* 1863, p. 116; *Swinh. Ibis*, 1863, p. 481; *id. P. Z. S.* 1863, p. 307; *Milne-Edw. N. Arch. Mus. Bull.* i. p. 14 (1865); *Swinh. Ibis*, 1865, p. 349; *Saurin, P. Z. S.* 1866, p. 436 [Amour, N. China, Corea]; *Swinh. Ibis*, 1867, pp. 390, 402 [Cheefoo]; *David. N. Arch. Mus. Bull.* iii. p. 37 (1867) [Mongolia]; *Gray, List Gallinæ Brit. Mus.* p. 27 (1867); *Dybowski, J. f. O.* 1868, p. 337; *David, P. Z. S.* 1868, p. 210; *Gray, Hand-l. B.* ii. p. 257 (1870); *Homeyer, J. f. O.* 1870, p. 173; *Elliot, P. Z. S.* 1870, p. 408; *Hutton, Tr. N. Z. Inst.* p. 80 (1870); *id. Ibis*, 1870, p. 397 [N. Zealand]; *Melliss, Ibis*, 1870, p. 103 [St. Helena]; *Swinh. P. Z. S.* 1871, p. 398 [Canton to Pekin to Han-kow]; *David, N. Arch. Mus. Bull.* vii. p. 11 (1871) [Pekin, Mongolia]; *Elliot, Monog. Phas.* ii. pl. v. [text] (1872); *Swinh. Ibis*, 1875, p. 125 [Cheefoo]; *Tacz. J. f. O.* 1876, p. 201 [Ussuri]; *id. Bull. Soc. Zool. Fr.* i. p. 245 (1876) [Amour and Ussuri]; *David & Oustal. Ois. Chine*, p. 409 (1877); *Prjev. Mongolia*, ii. p. 114 (1876); *id., in Rowl. Orn. Misc.* ii. p. 385 (1877) [Hoang-ho, Ordos, Ussuri]; *Bolau, J. f. O.* 1880, p. 131 [Askold]; *Blakist. & Pryer, Tr. As. Soc. Jap.* 1882, p. 127 [Tsusima]; *Slater, Ibis*, 1882, p. 435 [Hankow, Tchang]; *Seebohm, Ibis*, 1884, p. 267 [Kiukiang]; *Bogd. Consp. Av. Ross.* fasc. i. p. 21(1884); *Seebohm, Zool.* 1886, p. 225 [St. Helena]; *id. Ibis*, 1887, p. 169; *Giglioli et Salvad. P. Z. S.* 1887, p. 584 [Corea]; *Tacz. P. Z. S.* 1887, p. 610 [Corea], 1888, p. 467 [Mantchouria]; *Dörries, J. f. O.* 1888, p. 88 [Ussuri]; *Seebohm, Ibis*, 1888, p. 313; *id. B. Jap.* p. 369 (1890); *Styan, Ibis*, 1891, pp. 329, 499 [Lower Yangtse]; *Pleske, Bull. Acad. St. Pétersb.* xiii. p. 296 (1892); *Seebohm, Ibis*, 1892, p. 99 [Tsu-sima] and p. 248 [Corea]; *de la Touche, Ibis*, 1892, p. 493 [Foochow and Swatow Hills].

Phasianus albotorquatus, *Bonnat. Tabl. Encycl. Méth.* i. p. 184 (1791); *Brandt, Bull. Acad. St. Pétersb.* iii. p. 51 (1844).

Phasianus colchicus, var. mongolica, *Pall. Zoogr. Rosso-Asiat.* ii. p. 84 (1811).

Adult male. Resembles the male of *P. decollatus*, but may be at once distinguished from it and all the previous grey-rumped species by the white ring round the neck; from *P. formosanus* it generally differs in having the ground-colour of the mantle and the flank-feathers bright orange-buff instead of primrose (but in some pale specimens from Corea and China this difference is scarcely apparent); the margins to the chest- and breast-feathers very narrowly margined with purple, and the whole breast glossed with pink as in *P. persicus*. Total length 35 inches, wing 9·2, tail 20·2, tarsus 2·7.

Adult female. Closely resembles the female of *P. colchicus*. Total length 24·2 inches, wing 8·2, tail 10·5, tarsus 2·4.

Hab. Ranging from the Lower Amoor, Mantchouria, Corea, Tsusima, and Eastern Mongolia, through Eastern China as far south as Canton.

a. ♂ ad. sk.	Blagovestchensk, Amur R., Dec.	Purchased.
b, c. ♂ ♀ ad. sk.	Corea.	C. W. Campbell, Esq. [P.].

d. ♂ ad. sk.	China.	Purchased.
e. ♂ ad. sk.	China.	Gould Coll.
f, g. ♂ ad. sk.	China.	J. R. Reeves, Esq. [P.].
h, i. ♂ imm. et ♀ ad. st.	China.	J. R. Reeves, Esq. [P.].
k. ♂ ad. sk.	China.	Mrs. Ince [P.].
l. ♀ ad. sk.	Shanghai (*Reeves*).	Gould Coll.
m. ♂ ad. sk.	England.	Tweeddale Coll.
n, o. ♂ ad. sk. et st.	Bedfordshire.	Gould Coll.
p. ♂ ad. sk.	Kent, Dec.	G. C. Norman, Esq. [P.].
q, r. ♂ ad. sk. et st.	St. Helena.	Gould Coll.
s. ♂ ad. st.		Capt. Sir E. Belcher, R.N. [P.].
t. ♀ skeleton.		Zool. Soc. Coll.

Hybrid between Phasianus colchicus *and* P. torquatus. *See* p. 323.

Hybrid between Phasianus torquatus *and* P. versicolor.

Phasianus versicolor × P. torquatus, *Blasius, Monatschr. Schutze Vogelw.* 1889, p. 94, pls.

a, b. ♂ ad. sk.	England.	Gould Coll.

14. Phasianus satscheunensis.

Phasianus satscheunensis, *Prjev. Reisen in Tibet*, p. 59 (1884) (Satschen); *Dedit. J. f. O.* 1886, p. 527.
Phasianus shawi, *Seebohm, P. Z. S.* 1888, p. 415 [part; Sa-tschen].
Phasianus satscheuensis, *Pleske, Bull. Acad. St. Pétersb.* xiii. p. 296 (1892) [N. of the Nan-Shan Mts.].

Adult male. Differs chiefly from *P. torquatus* in having the general colour of the upper parts much paler; the scapulars and secondaries margined with sandy brown instead of Indian-red; and the margins to the feathers of the chest and underparts wider and purplish green, whereas in *P. torquatus* they are entirely absent or only represented by the narrowest purplish border.

Adult female. Very much paler than the female of *P. torquatus* and most nearly resembles the female of *P. vlangali*.

Hab. Sa-tschen, N. of the Nan-Shan Mountains.

a, b. ♂ ♀ ad. sk.	Schanto-po, N. of the Nan-Shan Mts., March (*Grum-Grzimailo*).	St. Petersburg Mus. [E.].
c, d. ♂ ♀ ad. sk.	Schao-wan, March (*Prjevalsky & Grum-Grzimailo*).	St. Petersburg Mus. [E.].

15. Phasianus formosanus.

Phasianus torquatus, *Swinh.* (*nec Gm.*) *Ibis*, 1863, p. 401, 1866, p. 404.
Phasianus formosanus, *Elliot, P. Z. S.* 1870, p. 406 [Formosa]; *id. Monog. Phas.* ii. pl. vi. [text] (1872); *David & Oustal. Ois. Chine*, p. 410 (1877) [Formosa]; *Seebohm, Ibis*, 1888, p. 313.

Nearly adult male (type). Differs from *P. torquatus* generally in having the ground-colour of the mantle and flanks pale primrose,

the chest very slightly glossed with pink, and the margins of the feathers more widely edged all round with purplish green. Total length 26·8 inches, wing 8·9, tail 15·8, tarsus 2·7. (*Mus. H. Seebohm.*)

Hab. Formosa.

16. Phasianus versicolor.

Phasianus versicolor, *Vieill. Gal. Ois.* ii. p. 23, pl. 205 (1825); *Gray, in Griff. ed. Cuv.* iii. p. 23, pl. (1829); *Temm. Pl. Col.* v. pls. 6, 7 [nos. 486, 493] (1830); *Less. Traité d'Orn.* p. 496 (1831); *Schinz, Nat. Abbild. Vög.* p. 251, pl. 96 (1833); *Jard. Nat. Lib., Orn.* iv. p. 200, pls. xiv. & xv. (1834); *Gray, Gen. B.* iii. p. 497 (1845); *Schinz, Nat. Vög.* p. 150, pl. 72 (1853); *Cassin, Perry's Exp. Jap.* ii. p. 223, pl. 1 (1856) [Simoda]; *Gould, B. Asia*, vii. pl. 40 (1857); *Sclat. & Wolf, Zool. Sket.* i. pl. 38 (1861); *Sclat. List Phas.* p. 4 (1863); *id. P. Z. S.* 1863, p. 116; *Gray, List Gallinæ Brit. Mus.* p. 28 (1867); *id. Hand-l. B.* ii. p. 258 (1870); *Elliot, Monog. Phas.* ii. pl. ix. [text] (1872); *Swinh. Ibis*, 1875, p. 452 [Hakodadi]; *Blakist. & Pryer, Ibis*, 1878, p. 226 [Hondo]; *Seebohm, Ibis*, 1888, p. 313; *id. B. Jap.* p. 370 (1890) [Japanese Is. except Yezo].

Phasianus diardi, *Temm. Pl. Col.* v. text to P. versicolor (1830).

Adult male. Distinguished from all other species of the genus by having the whole of the chest, breast, and flanks uniform dark green; the top of the head is bronze-green as in *P. torquatus*; the mantle dark green, shot with purple and marked with lines of buff, mostly following the shape of the feathers; the upper tail-coverts are uniform greenish slate, without any rust-coloured feathers on each side as is the case in all the other grey-rumped species. Total length 29 inches, wing 9·6, tail 17·5, tarsus 2·7.

Adult female. Closely resembles the female of *P. strauchi*, but the feathers of the mantle are almost entirely black in the middle, with sometimes a thin shaft-stripe of rufous, and the green tips to the feathers are usually well-marked; also the black bars on the feathers of the chest, breast, and flanks are much more strongly marked. Total length 24 inches, wing 8·2, tail 10·5, tarsus 2·2.

Hab. Japanese Islands, except Yezo.

a, b. ♂ ♀ ad. sk.	Japan.	Gould Coll.
c, d. ♂ ♀ ad. sk.	Japan.	E. Hartert, Esq. [E.].
e. ♀ ad. sk.	Japan.	'Challenger' Exp.
f, g. ♂ ♀ ad. st.	Japan.	Zool. Soc. Coll.
h. ♂ ad. st.	Japan.	Purchased.
i. ♂ ad. sk.	Hakodadi, Feb.	Tweeddale Coll.
k. ♀ ad. sk.	Nagasaki.	F. Ringer, Esq. [P.].
l. ♂ ad. sk.	Northamptonshire, Feb.	Lord Lilford [P.].
m. Skeleton.		

Hybrid between G. horsfieldi *and* P. versicolor. *See* p. 303.

Hybrid between P. colchicus *and* P. versicolor. *See* p. 323.

Hybrid between P. torquatus *and* P. versicolor. *See* p. 333.

17. Phasianus ellioti.

Phasianus ellioti, *Swinh. P. Z. S.* 1872, p. 550 [Che-kiang]; *David & Oustal. Ois. Chine*, p. 412, pl. 101 (1877) [Che-kiang, E. Fo-kien].
Calophasis ellioti, *Elliot, Monog. Phas.* ii. pl. xiii. *bis* [text] (1872); *Gould, B. Asia*, vii. pl. 23 (1874).
Gallophasis ellioti, *Hume, Ibis*, 1881, p. 608.

Adult male. Top of the head sandy brown mixed with chestnut; nape and back of the neck grey, shading into white on the sides; chin, throat, and fore part of neck black, slightly glossed with purple; a band of black feathers widely tipped with white divides the mantle from the scapulars and runs roughly parallel to a dark purplish-steel band across the lesser wing-coverts: the mantle, scapulars, median wing-coverts, chest, and breast orange-red, with fiery-gold reflections, the former and the latter with short subterminal black cross-bars; the lower back and rump-feathers black, barred and fringed with white; primaries and their coverts brown, the terminal part of the outer webs and tips of the former mixed with rufous; secondaries and secondary-coverts mostly brown on the inner web and chestnut on the outer, with a black subterminal bar and white tip; the white tips of the coverts are very wide, and make a broad bar across the wing, subparallel to the two former; flank-feathers like the secondary-coverts; belly and vent white; under tail-coverts black, mixed with chestnut. Upper tail-coverts and tail with wide alternate bars of chestnut and grey, edged with black, most marked on the outer tail-feathers. Total length 32·5 inches, wing 8·8, tail 19, tarsus 2·8.

Adult female. Feathers of the top of the head brown, edged with chestnut; sides of the head, back, and sides of the neck and chin sandy grey; throat and fore part of the neck black; mantle black, mottled with rufous buff and tipped with sandy brown, the upper feathers with irregular white shaft-spots; lesser, median, and secondary wing-coverts very similar, and separated from the mantle by a wide sandy-grey band; lower back, rump, and upper tail-coverts sandy brown, mottled with rufous buff and black. Quills dark brown, irregularly barred and mottled with buff and rufous buff. Chest, breast, and flanks sandy brown, irregularly spotted with black; the lower feathers edged with white, rest of underparts mostly white; middle pairs of tail-feathers brownish white mottled with black, outer pairs and under tail-coverts chestnut widely tipped with white, and with a wide black subterminal bar. Total length 20 inches, wing 8, tail 7·7, tarsus 2·5.

Hab. Mountains of South-eastern China, Che-kiang, and Fo-kien.

a, b. ♂ ♀ ad. st.	Ningpo.	Purchased.

18. Phasianus humiæ.

Callophasis humiæ, *Hume, Str. F.* ix. p. 461 (1880) [S. Manipur]; *id. Ibis*, 1881, p. 608; *Godw.-Aust. P. Z. S.* 1882, p. 715, pl. li. [N.E. Manipur]; *Hume, Str. F.* xi p. 302 (1888).
Phasianus humiæ, *W. Sclat. Ibis*, 1891, p. 152 [Upper Burmah].

Adult male. Differs chiefly from *P. ellioti* in having the neck, upper parts of the mantle, and chest glossed with purplish steel like the band across the wing-coverts but darker: the breast chestnut, more or less glossed with steel-colour and fiery orange-red round the margins; the belly and flanks chestnut; the under tail-coverts black glossed with steel-green. Tail and upper tail-coverts grey: the middle pair of tail-feathers widely and irregularly barred with a mixture of black and chestnut; the middle pairs on each side barred with black, and the outermost pairs almost entirely black, greyish only towards the base. Total length 33·3 inches, wing 8·5, tail 20·6, tarsus 2·5.

Adult female. Differs from that of *P. ellioti* in not possessing the black on the throat; the white underparts of that bird (which are in keeping with those of the male) are also absent. Wing 8·2 inches, tail 7, tarsus 2·2. (*Godwin-Austen.*)

Hab. Manipur and Upper Burmah; Shan Hills.

a. ♂ ad. sk.	Manipur (*A. O. H.*).	Hume Coll.	
b. ♂ ad. sk.	Manipur, April (*A. O. H.*).	Hume Coll. (Type of the species.)	

19. Phasianus sœmmerringi.

Phasianus sœmmerringii, *Temm. Pl. Col.* v. pls. 8, 9 [nos. 487, 488] (1830); *Less. Traité d'Orn.* p. 496 (1831); *Jard. Nat. Lib., Orn.* iv. p. 205, pl. xvii. (1834); *Gray, List. of B.* pt. iii. *Gall.* p. 24 (1844); *id. Gen. B.* iii. p. 497 (1845); *Cassin, in Perry's Exp. Jap.* ii. p. 225, pl. 2 (1856) [S. & middle of Hondo]; *Sclat. & Wolf, Zool. Sket.* 2. pl. 32 (1861); *Sclat. List of Phas.* p. 5, pl. 2 (1863) [Simoda, Hondo]; *Gray, List Gallinæ Brit. Mus.* p. 29 (1867); *id. Hand-l. B.* ii. p. 258 (1870); *Gould, B. Asia,* vii. pl. 37 (1867); *Elliot, Monog. Phas.* ii. pl. xii. [text] (1872); *Blakist. & Pryer, Ibis,* 1878, p. 226 [Hondo]; *iid. Trans. As. Soc. Jap.* 1882, p. 126 [not found in Yezo]; *Seebohm, B. Jap.* p. 370 (1890) [Kiu-siu].

Adult male. General colour above chestnut or brownish chestnut, the margins of the feathers of the mantle, chest, scapulars, lower back, and rump glossed with purplish carmine with fiery-gold reflections; the basal part of the feathers black, most noticeable on the wing-coverts; quills brownish black, the primaries mottled with rufous buff and the secondaries irregularly margined round the outer web with rufous; breast and rest of underparts resemble the wing-coverts, but the feathers are paler towards the margins; central tail-feathers chestnut with wide-set narrow black bars, above each of these black bars the chestnut is of a deeper colour and becomes gradually lighter towards the next bar; outermost tail-feathers chestnut, widely tipped with black. Total length 50 inches, wing 8·8, tail 37, tarsus 2·5.

Adult female. Top of the head blackish brown, each feather margined with rufous buff; back and sides of the neck and mantle rufous, shading into vinaceous towards the extremity of each feather, those of the mantle being somewhat coarsely mottled with

black; wing-coverts and scapulars similar, but of a more cinnamon-coloured tint and with more strongly marked buff shaft-stripes: lower back and rump sandy rufous, finely mottled with black and with black shaft-stripes; quills very similar to those of the male; chin, throat, and fore part of neck pale buff, each feather tipped with black; chest-feathers greyish rufous, paler on the breast and under-parts, and all with the basal part black; upper tail-coverts and middle pair of tail-feathers chestnut or rufous, indistinctly mottled with black, and paler towards the margins; outer tail-feathers chestnut tipped with white, and with a subterminal black band. Total length 21 inches, wing 8·1, tail 7·5, tarsus 2·1.

Hab. Japanese islands of Hondo and Kiu-siu.

a. ♂ ad. st.	Japan.	Leyden Museum [P.].
b, c. *♂ ♀ ad. st.	Japan.	Purchased.
d. ♀ ad. sk.	Japan.	Tweeddale Coll.
e. ♀ ad. st.	Nagasaki.	H. Whitely [C.].
f, g. ♂ ♀ ad. sk.	Nagasaki.	Gould Coll.
h–k. Skeletons.	Japan.	Purchased.

A marked variety of this species has been named *P. scintillans* by Gould. The male differs from the typical male of *P. sœmmerringi* in having most of the feathers of the wing-coverts, back, and especially the rump margined on either side with a white black-edged band instead of with fiery gold; while the lighter parts of the tail-feathers below the black cross-bars are usually paler and often strongly dotted with black. This form cannot possibly be regarded as a distinct species, for it not only occurs in the same islands where *P. sœmmerringi* is found, but every intermediate stage between the two forms may be seen.

The following synonymy belongs to this variety:—

Phasianus (Graphophasianus) scintillans, *Gould, Ann. Mag. N. H.* (3) xvii. p. 150 (1866) [Yokohama]; *id. B. Asia*, vii. pl. 38 (1867); *Seebohm, B. Jap.* p. 371 (1890) [Hondo].

Phasianus sœmmerringii, var. scintillans, *Elliot, Monog. Phas.* ii. pl. xiii. [text] (1872) [Nagasaki].

a. ♂ ad. st.	Japan.	Walter Langley, Esq. [P.].
b. ♂ ad. sk.	Japan.	Tweeddale Coll.
c. ♂ ad. sk.	Japan.	Gould Coll.
d, e. ♂ ♀ ad. sk.	Hondo Is., Japan.	Purchased.

20. Phasianus reevesi.

† Phasianus superbus, *Vieill. (nec Linn.) N. Dict. d'Hist. Nat.* xi. p. 40 (1817); *Jard. Nat. Lib., Orn.* iv. p. 202 (1834); *Lamprey, P. Z. S.* 1862, p. 220 [N.E. of Pekin].

Bar-tailed Pheasant, *Lath. Gen. Hist.* viii. p. 196, pl. cxxiv. (1823).

Phasianus reevesii, *J. E. Gray, in Griff. ed. Cuv.* iii. p. 25 (1829); *id. Ill. Ind. Zool.* i. pl. 39 (1830–32); *G. R. Gray, List of B.* pt. iii.

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* Intermediate, showing an approach to the variety *P. scintillans*.

† *Phasianus superbus*, Linn. Mantissa, p. 526 (1767–71), described from a Chinese drawing, cannot be identified; it is probably some domestic variety of *Gallus domesticus*, and certainly has nothing to do with *P. reevesi*, to which it has been referred.

Gall. p. 24 (1844); *id. Gen. B.* iii. p. 497 (1845); *Sclat. & Wolf, Zool. Sket.* 2. pl. 33 (1861); *Sclat. List of Phas.* p. 5, pl. 1 (1863) [North & Central China]; *Swinh. P. Z. S.* 1863, p. 307; *Saurin, P. Z. S.* 1866, p. 437 [Chi-li]; *David, N. Arch. Mus. Bull.* iii. p. 37 (1867) [near Toung-Liu]; *Gray, List Gallinæ Brit. Mus.* p. 28 (1867); *Gould, B. Asia*, vii. pl. 33 (1869); *Gray, Hand-l. B.* ii. p. 258 (1870); *David, N. Arch. Mus. Bull.* vii. p. 11 (1871) [Pekin, Sze-chuen]; *Elliot, Monog. Phas.* ii. pl. xi. [text] (1872); *David & Oustal. Ois. Chine*, p. 413 (1877) [Mts. N. & E. of Pekin & between Shen-se, Honan, and Sze-chuen]; *Ravensw. Tr. N. Durh.* vii. pt. 1, p. 168 (1878); *Creagh, Ibis*, 1886, p. 382; *Styan, Ibis*, 1891, pp. 329, 499 [Lower Yangtse].

Phasianus veneratus, *Temm. Pl. Col.* v. pl. 5 [no. 485] (1830); *Less. Traité d'Orn.* p. 496 (1831); *Jard. Nat. Lib., Orn.* iv. pl. xvi. (1834).

Syrmaticus reevesii, *Wagl. Isis*, 1832, p. 1229; *Swinh. P. Z. S.* 1871, p. 398.

Syrmaticus superbus, *Strickl. Ann. Mag. N. H.* vii. p. 36 (1841).

Adult male. Crown white, with some of the longer feathers narrowly tipped with black and surrounded by a wide black band, which crosses the forehead, lores, ear-coverts, and nape; a white patch below the eye; chin, throat, and nape white, edged below by a black ring which surrounds the neck; neck, mantle, lower back, rump, upper tail-coverts, and scapulars cinnamon, each feather bordered with black, giving these parts a scale-like appearance; wing-coverts white, widely margined and centred with black; primary-quills and coverts dark brown, mottled, especially on the outer web, with rufous buff; secondaries brownish black, irregularly barred with white and margined round the extremity or tipped with buff; chest-feathers black and white like the wing-coverts, but with wide chestnut margins, those of the sides and flanks with the terminal part buff; belly, thighs, and under tail-coverts black; central tail-feathers with the middle white, barred with black and chestnut, and margined on either side with brownish buff; outermost tail-feathers buff, narrowly tipped with black. Total length about 6 feet 6 inches, wing 10·3 inches, tail 5 feet, tarsus 3·1 inches.

Adult female. Crown of the head reddish brown, ear-coverts blackish brown with pale rufous-buff centres; rest of the head, chin, throat, and upper part of neck buff; lower part of neck and upper mantle rufous, mottled or blotched with black and tipped with rufous grey; a well-marked white patch or shaft-stripe down the centre of each feather; lower back, rump, and upper tail-coverts mottled with rufous buff and grey, and with black centre stripes; wing-coverts and scapulars somewhat like the mantle, but with buff instead of white stripes down the middle; quills and their coverts dark brown barred with rufous, some of the secondaries and their coverts tipped with buff; chest, upper breast, and sides chestnut, mottled with black and tipped with buff, each feather, especially those on the chest, with a trident-shaped white mark near the extremity; belly and rest of underparts mostly pale buff; centre tail-feathers mottled with sandy-buff and black, and with indistinct black blotches along the basal half of the shaft; outer feathers

chestnut, mixed with black, barred and tipped with white. Total length about 32 inches, wing 9, tail 16·6, tarsus 2·5.

Hab. Mountains of Northern and Western China, as far east as Kiu-kiang.

a, *b*. ♂ ad. sk. et ♀ ad. st.	China.	J. R. Reeves, Esq. [P.]. (Types of the species.)
c. ♂ ad. sk.	China.	Hardwicke Bequest.
d, *e*. ♂ ♀ ad. sk.	China.	Gould Coll.
f. ♂ ad. sk.	Argyllshire, March.	A. Miller, Esq. [P.].
g. Juv. st.	England.	Zool. Soc. Coll.
h. ♂ ad. st.	Norfolk.	H.R.H. Prince of Wales [P.].
i. ♀ skeleton.	China.	J. J. Stone, Esq. [P.].
k. Imperfect skel.	China.	Zool. Soc. Coll.

For Hybrid between Phasianus colchicus *and* P. reevesi, *see* p. 324.

Hybrid between Phasianus reevesi *and* Chrysolophus pictus.

a. ♂ ad. st.	Devonshire.	Ralph Sanders, Esq. [P.].
b, *c*. ♂ imm. st.	Zoological Gardens.	Zool. Soc. Coll.

36. CHRYSOLOPHUS.

	Type.
Thaumalea, *Wagl.* (*nec Ruthe, Dipt.* 1831) *Isis*, 1832, p. 1227	C. pictus.
Chrysolophus, *J. E. Gray, Ill. Ind. Zool.* ii. pl. 41. fig. 2 (1833–4)	C. pictus.
Epomia, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844)	C. amherstiæ.

Tail composed of 18 feathers, vaulted, the middle pair very long, more than four times as long as the outermost pair, which are short.

1st primary much shorter than the 2nd, which is rather shorter than the 10th, the 5th being slightly the longest.

Tarsus rather longer than the middle toe and claw, and generally armed in the male with a pair of short spurs.

Male with a full crest of hairy feathers, and a cape-like development of erectile, squarely truncate feathers.

Range. Mountains of Eastern Thibet and Western and Southern China.

Key to the Species.

A. Breast crimson-scarlet.
  a. Middle pair of tail-feathers black, with rounded spots of pale brown ..... *pictus*, p. 339.
  b. Middle pair of tail-feathers obliquely striped with black and light brown ..... *obscurus*, p. 341.
B. Breast pure white ..... *amherstiæ*, p. 342.

1. Chrysolophus pictus.

Red Pheasant Cock from China, *Albin, Nat. Hist. B.* iii. p. 34, pl. xxxvi. (1740).
Painted Pheasant from China, *Edw. Nat. Hist. B.* ii. pl. 68 (1747).
Phasianus aureus sinensis, *Briss. Orn.* i. p. 271 (1760).
Phasianus pictus, *Linn. S. N.* i. p. 272 (1766); *Gm. S. N.* i. pt. ii.

p. 743 (1788); *Lath. Ind. Orn.* ii. p. 630 (1790); *Bonnat. Tabl. Encycl. Méth.* i. p. 186, pl. 88. fig. 4 (1791); *Shaw, Mus. Lever.* p. 204, pl. (1792); *Hayes, Osterl. Menag.* p. 5, pls. 5 & 6 (1794); *Pall. Zoogr. Rosso-Asiat.* ii. p. 86 (1811); *Temm. Pig. et Gall.* ii. p. 341 (1813), iii. p. 671 (1815); *Vieill. N. Dict. d'Hist. Nat.* xi. p. 41 (1817); *Steph. in Shaw's Gen. Zool.* xi. p. 231 (1819); *Werner, Atl. Ois. d'Eur.*, Ord. 10, pl. 3 (1828); *Griff. ed. Cuv.* iii. p. 23 (1829); *Less. Traité d'Orn.* p. 495, pl. 83. fig. 2 (1831); *Schinz, Nat. Abbild. Vög.* p. 250, pl. 96 (1833); *Jard. Nat. Lib., Orn.* iv. p. 209, pl. xviii. (1834); *Schinz, Nat. Vög.* p. 149, pl. 72 (1853).

Le Faisan doré, *D'Aubent. Pl. Enl.* pl. 217; *Buff. Hist. Nat. Ois.* ii. p. 355 (1771).

Painted Pheasant, *Lath. Gen. Syn.* ii. p. 717 (1783); *id. Gen. Hist.* viii. p. 194 (1823).

Thaumalea picta, *Wagl. Isis*, 1832, p. 1228; *Gray, List of B.* pt. iii. *Gall.* p. 24 (1844); *id. Gen. B.* iii. p. 497 (1845); *id. Cat. Hodgs.* ed. i. p. 124 (1846); *Schrenck, Reis. Amur-L.* i. p. 521 (1859) [Dauria and Amurland*]; *Swinh. P. Z. S.* 1863, p. 307; *Sclat. List of Phas.* p. 5 (1863); *Fitz. Atl. Nat., Vög.* fig 228 (1864); *Gould, B. Asia*, vii. pl. 19 (1866); *David, N. Arch. Mus. Bull.* vii. p. 11 (1871) [Sze-chuen]; *Elliot, Monog. Phas.* ii. pl. xv. [text] (1872); *David & Oustal. Ois. Chine*, p. 414 (1877) [S. and S.W. Provs. of China as far as Sin-ling Mts.].

Chrysolophus pictus, *J. E. Gray, Ill. Ind. Zool.* ii. pl. 41. fig. 2 (1834); *G. R. Gray, List Gallinæ Brit. Mus.* p. 29 (1867); *id. Hand-l. B.* ii. p. 258 (1870); *Swinh. P. Z. S.* 1871, p. 398 [W. China to Koko-nor].

Epomia picta, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844).

Adult male. Top of the head and crest brilliant golden yellow; cape-like feathers covering the back of the neck brilliant orange at the extremity, shading into yellowish buff towards the base, each feather with a terminal and subterminal black band glossed with steel-blue; feathers of the mantle rich dark green, shading into purplish blue, and with the basal half grey; lower back, rump, and shorter upper tail-coverts brilliant golden yellow like the crest, some of the feathers on the sides and the shorter upper tail-coverts mixed with crimson-scarlet; longer upper tail-coverts and central pair of tail-feathers black, thickly ocellated with pale brown spots, the former with the terminal half crimson-scarlet and the latter tipped with whitish buff; the rest of the tail-feathers are obliquely barred and marked with pale brown and black, except the outermost pairs, which are dark chestnut-brown, mottled with black; scapulars dark crimson-scarlet; wing-coverts chestnut, mottled with black; quills brownish black, the primaries partially margined on the outer web with buff, and all the outer secondaries glossed with rich purple-blue; chin, throat, and sides of the head pale rusty; rest of the underparts crimson-scarlet, shading into orange-brown on the middle of the belly and thighs. Bill greenish yellow; legs and feet greenish horn. Total length about 40 inches, wing 7·7, tail 27, tarsus 2·8.

Adult female. General colour of the head and mantle brown, barred with buff and black, the feathers of the mantle are mixed

* This is a mistake: David, P. Z. S. 1868, p. 210.

with rufous; lower back, rump, and upper tail-coverts pale brown, finely vermiculated with black; wing-coverts, scapulars, and secondaries rather coarsely barred with black and buff and tipped with greyish brown, finely vermiculated with black; primaries dark brown, irregularly barred with buff on the outer web and rufous on the inner; chin and throat pale buff; sides of the head and rest of underparts buff, barred with brownish black, except on the middle of the belly, which is nearly immaculate; centre pair of tail-feathers brown, with irregular blackish cross-markings, outer feathers washed with rufous and indistinctly marked with buff and black bars and mottlings. Total length 24 inches, wing 7, tail 14, tarsus 2·4.

Hab. Mountains of Southern and Western China, extending into Koko-nor.

a. ♂ ad. sk.	China.	Hardwicke Bequest.
b. ♂ vix ad. sk.	China.	E. Cross, Esq. [P.].
c. ♀ ad. sk.	China.	Purchased.
d. ♂ ad. sk.	Ichang.	A. E. Pratt, Esq. [C.].
e. ♂ ad. sk.	[China.]	Gould Coll.
f. ♂ imm. sk. (bad state).	[China.]	B. H. Hodgson, Esq. [P.].
g. ♀ ad. st.	Cambridgeshire.	Mr. J. Baker [P.].
h. ♀ ad. st. (assuming male plumage).	Warwickshire.	Rev. F. Annesley [P.].
i. ♂ ad. sk.	Herefordshire, Dec.	O. E. Cresswell, Esq. [P.].
k. ♂ ad. st.	Herefordshire, Sept.	J. Horne, Esq.
l. ♂ imm. st.	England.	Zool. Soc. Coll.
m. ♂ ad. sk.		Purchased.
n, *o.* ♂ ♀ ad. sk.		Zool. Soc. Coll.
p, *q.* Skeletons.		
r. Skull and sternum.		

Hybrid between Chrysolophus pictus *and* C. amherstiæ.

Thaumalea amherstiæ×T. picta, *Elliot, Monog. Phas.* ii. pl. xvii. [text] (1872).

a. ♂ ad. st. (*C. amherstiæ* ⅔, *C. pictus* ⅓).	Herefordshire.	Purchased.
b. ♂ ad. st.		Dr. Vekemans [P.].

Hybrid between C. pictus *and* Gallus domesticus (*var.* Bantam).

a. Ad. st.	Fifeshire, Nov.	W. Berry, Esq. [P.].

Hybrid between Phasianus colchicus *and* C. pictus. *See* p. 324.

Hybrid between Phasianus reevesi *and* C. pictus. *See* p. 339.

Subsp. *a.* Chrysolophus obscurus.

Phasianus pictus obscurus, *Schl. Ned. Tijd. Dierk.* ii. p. 152 (1865).
Chrysolophus obscurus, *Gray, List Gallinæ Brit. Mus.* p. 30 (1867).
Thaumalea obscura, *Elliot, Monog. Phas.* ii. pl. xvi. [text] (1872).

Adult male. Differs from the typical male of *C. pictus* in having the sides of the head, chin, and throat brownish black: the scapulars brownish black, scarcely tinged with red, the outer webs of the

primaries not margined with buff, and the central pair of tail-feathers pale brown, obliquely barred and marked with black, and similar to the second pair.

Adult female. Is said to differ from the typical female of *C. pictus* in having the general colour of the plumage darker, especially on the sides of the head and throat, and the ear-coverts uniform dark brown.

Hab. Locality, if any, unknown.

I am exceedingly doubtful if this bird has any right to even subspecific rank. It is probably a domestic variety of *C. pictus* and has never been obtained (so far as I am aware) in a wild state.

a. ♂ ad. sk. No locality. Gould Coll.

2. Chrysolophus amherstiæ.

Phasianus amherstiæ, *Leadb. Tr. Linn. Soc.* xvi. p. 129, pl. 15 (1828); *Gray, in Griff. ed. Cuv.* iii. p. 25 (1829); *Less. Traité d'Orn.* p. 496 (1831); *Blyth, Cat. Mus. As. Soc.* p. 246 (1849).

Phasianus amherstia, *Temm. Pl. Col.* v. *Phas.* p. 11 (1830); *Jard. Nat. Lib., Orn.* iv. p. 210 (1834).

Thaumalea amherstiæ, *Wagl. Isis*, 1832, p. 1228; *Gray, List of B.* pt. iii. *Gall.* p. 24 (1844); *id. Gen. B.* iii. p. 497, pl. cxxv. (1845); *id. Cat. Hodys.* ed. i. p. 124 (1846); *Sclat. List of Phas.* p. 5, pl. 3 (1863); *Swinh. P. Z. S.* 1863, p. 307; *Gould, B. Asia*, vii. pl. 20 (1866); *Sclat. P. Z. S.* 1870, pp. 128, 670 [Yun-ling Mts., W. Sze-chuen]; *id. Ibis*, 1870, p. 297 [Ta-tsien-lou]; *Swinhoe, P. Z. S.* 1870, p. 111; *David, N. Arch. Mus. Bull.* vii. p. 11 (1871) [Moupin]; *Elliot, Monog. Phas.* ii. p. xx, pl. xiv. [text] (1872); *Sclat. Ibis*, 1874, p. 169; *David & Oustal. Ois. Chine*, p. 415, pl. 103 (1877) [W. Sze-chuen, Yunnan, Quei-chow, E. Thibet]; *Anders. B. W. Yunnan*, p. 671 (1878) [Yunnan Frontier Hills]; *Seebohm, Ibis*, 1891, p. 380 [W. Sze-chuen].

Epomia amherstii, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844).

Chrysolophus amherstiæ, *Gray, List Gallinæ Brit. Mus.* p. 30 (1867); *id. Hand-l. B.* ii. p. 258 (1870); *Swinh. P. Z. S.* 1871, p. 398.

Adult male. Top of the head dark bronze-green; elongate occipital crest blood-red; cape-like feathers covering the back of the head and neck pure white, margined and barred across the middle with black, glossed with steel-blue, and mostly rounded at the extremity; mantle and scapulars dark green, very similar in colour to the feathers of the mantle in *C. pictus*, but the extremities are much more rounded; feathers of the lower back and rump black, widely tipped with yellowish buff, and with a subterminal band glossed with dark green; shorter upper tail-coverts tipped with scarlet; longer upper tail-coverts white, irregularly barred with black and widely tipped wtih orange-red; centre pair of tail-feathers white, with arched black bars on either web and the interspaces marked with wavy lines of black; the outer feathers have the outer webs brownish white, barred with black, but without any intermediate black mottlings, and the inner webs white irregularly mottled with black; the wing-coverts and outer secondaries black, glossed with dark purplish green; primaries brownish black, partially margined with buff on the outer web, remaining secondaries black; chin,

throat, and fore part of neck brownish black, slightly glossed with dark green; chest-feathers similar to those of the mantle; breast and rest of underparts pure white, barred with black on the flanks and thighs; under tail-coverts black, glossed with green. Naked skin surrounding the eye blue; bill greenish yellow; legs and feet bluish horn. Total length about 50 inches, wing 8·2, tail 36, tarsus 3·1.

Adult female. Very similar to the female of *C. pictus*, but the naked skin round the eye is blue, like that of the male.

Hab. Mountains of Western China and Eastern Thibet.

a, b. ♂ ad. et imm. sk.	Mts. of Thibet.	B. H. Hodgson, Esq. [P.].
c. ♂ ad. st.	Herefordshire.	Purchased.
d. ♂ pull. sk.	Lowestoft, June.	Colonel E. A. Butler.

37. GALLUS *.

	Type.
Gallus, *Linn. Faun. Suecica*, p. 61 (1746); *Briss. Orn.* i. p. 166 (1760); *Temm. Pig. et Gall.* ii. p. 87 (1813)	G. gallus.
Alector, *Klein, Hist. Av. Prodr.* p. 111 (1750)	G. gallus.
Creagrius, *Gloger, Hand- u. Hilfsb.* p. 387 (1842)	G. varius.

Tail composed of 14 or 16 (in *G. varius*) feathers laterally compressed as in *Lophura*; the middle pair of feathers are much the

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* Doubtful species:—

1. GALLUS ÆNEUS.

Gallus æneus, *Cuv., Temm. Pl. Col.* v. pl. 3 [no. 374] (1825); *Less. Traité d'Orn.* p. 492 (1831); *Schinz, Nat. Abbild. Vög.* p. 243, pl. 94 (1833); *Jard. Nat. Lib., Orn.* iv. p. 183, pl. ix. (1834); *Gray, Gen. B.* iii. p. 499 (1845); ? *id. P. Z. S.* 1849, pl. viii.; *Blyth, Ibis*, 1867, p. 156; *Schinz, Nat. Vög.* pl. 69 (1853).

This is believed by Blyth and others to be only a hybrid between *G. domesticus* and *G. varius*, but it may prove to be a distinct species resident in the jungles of Sumatra, whence it was originally described.

The specimen in the British Museum formed part of the old collection of the Zoological Society, and differs somewhat from the description of the type which is preserved in the Paris Museum.

a. ♂ ad. sk.	No locality.	Gould Coll.

2. GALLUS TEMMINCKI.

Gallus temminckii, *Gray, P. Z. S.* 1849, p. 62, pl. vii.; *id. List Gallinæ Brit. Mus.* p. 39 (1867) [Batavia]; *Blyth, Ibis*, 1867, p. 156; *Gray, Hand-l. B.* ii. p. 261 (1870).

There can be very little doubt that this bird is merely a hybrid between *G. gallus* and *G. varius*.

a. ♂ ad. sk.	Batavia.	Purchased. (Type.)

3. GALLUS STRAMINEICOLLIS.

Gallus stramineicollis, *Sharpe, P. Z. S.* 1879, p. 317 (Sulu Is.); *id. J. f. O.* 1879, p. 423.

This is probably only a domestic variety, although Mr. Burbidge, who obtained the only specimen on record, was satisfied that it was a wild bird.

a. ♂ imm. sk.	Sulu Is. (*Burbidge*).	H. Veitch, Esq. [P]. (Type.)

longest, twice as long as the second pair and nearly four times as long as the outer pair.

1st primary considerably shorter than the 10th; and the 2nd falls between the 8th and 10th. The 5th is slightly the longest.

In the males a high comb extends along the middle of the head from the base of the culmen to behind the posterior margin of the eyes and is serrated or entire: sides of the face, chin, and throat naked; either a pair of wattles on each side of the head, one below the ear and the other on the side of the throat, or a single wattle down the middle of the throat.

Tarsus considerably longer than the middle toe and claw; and armed with a long, sharp, curved spur.

Range. Indo-Malayan region, Cochin China, Hainan, Philippine Is., Palawan, Sumatra, Java, Timor, Lombock, and Celebes.

Key to the Species.

I. Comb and spurs largely developed; middle pair of tail-feathers elongate. (*Males.*)
  A. Comb emarginate; a wattle on each side of the throat. Tail of 14 feathers.
    a. Hackles covering the mantle orange-red or yellowish orange; breast black ..... *gallus*, p. 344.
    b. Hackles covering the mantle yellow with dark shaft-stripes; breast reddish orange.. *lafayetti*, p. 348.
    c. Hackles covering the mantle barred alternately with black and white and each with a yellow wax-like terminal spot; breast-feathers black edged with greyish white and with a white shaft-stripe..... *sonnerati*, p. 350.
  B. Margin of comb entire; a single wattle down the middle of the throat. Tail of 16 feathers. *varius*, p. 352.

II. Comb rudimentary; spurs not developed; middle tail-feathers not elongate. (*Females.*)
  C. Lower back sandy brown finely mottled with black.
    d. Breast-feathers pale reddish brown ..... *gallus*, p. 344.
    e. Breast-feathers white, fringed and marked with black.
      a'. Outer webs of secondaries widely barred with black and buff..... *lafayetti*, p. 348.
      b'. Outer webs of secondaries sandy brown finely mottled with black ..... *sonnerati*, p. 350.
  D. Lower back black, irregularly barred and fringed with buff; breast dull buff; outer webs of secondaries black barred with buff.. *varius*, p. 352.

1. Gallus gallus.

Phasianus gallus, *Linn. S. N.* i. p. 270 (1766); *Raffl. Trans. Linn. Soc.* xiii. p. 319 (1822) [Sumatra].
Grande Caille de la Chine, *Sonn. Voy. Ind. Orient.* ii. p. 171 (1782).
Hackled Partridge, *Lath. Gen. Syn.* ii. p. 766, pl. 66 (1783); *id. Gen. Hist.* viii. p. 307, pl. 129 (1823).
Tetrao ferrugineus, *Gm. S. N.* i. pt. ii. p. 761 (1788).
Perdix ferruginea, *Lath. Ind. Orn.* ii. p. 651 (1790).

Coturnix spadicea, *Bonnat. Tabl. Encycl. Méth.* i p. 218 (1791).

Gallus bankiva, *Temm. Pig. et Gall.* ii. p. 87 (1813), iii. p. 654 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 198 (1819); *Horsf. Tr. Linn. Soc.* xiii. p. 185 (1822) [Java]; *Vieill. Tabl. Encycl. Méth.* i. p. 364 (1823); *Griff. ed. Cuv.* iii. p. 20 (1829); *Guérin, Icon. Règ. Anim., Ois.* p. 26, pl. 42. figs. 2, 2*a* (1829–38); *J. E. Gray, Ill. Ind. Zool.* i. pl. 43. fig. 3 (1830–32); *Less. Traité d'Orn.* p. 491 (1831); *Schinz, Nat. Abbild. Vög.* p. 342, pl. 94 (1833); *Jard. Nat. Lib., Orn.* iv. p. 175, pl. (1834); *Hodgs. in Gray's Zool. Misc.* p. 85 (1844); *Gray, List of B.* pt. iii. *Gall.* p. 27 (1844); *id. Gen. B.* iii. p. 499 (1845); *id. Cat. Hodgs.* ed. i. p. 125 (1846); *Schinz, Nat. Vög.* p. 145, pl. 69 (1853); *Adams, P. Z. S.* 1858, p. 498 [Simla, S. Cashmere]; *Wallace, P. Z. S.* 1863, p. 486 [Lombock, Timor]; *Sclat. List of Phas.* p. 10 (1863); *Blyth, Ibis*, 1867, p. 156; *Melliss, Ibis*, 1870, p. 103 [St. Helena]; *Wald. Tr. Zool. Soc.* viii. pt. 2, p. 86 (1872) [Celebes]; *Hartl. & Finsch, P. Z. S.* 1872, pp. 89, 103 [Pelew Is.]; *Tweedd. P. Z. S.* 1878, p. 953 [Zamboanga], 1879, p. 73 [Basilan]; *Meyer, Ibis*, 1879, p. 138 [Celebes, Togian Is.]; *Guillem. P. Z. S.* 1885, p. 272 [Sulu Is.]; *Blas. Ibis*, 1888, p. 374 [Palawan]; *Shufeldt, J. Comp. Med. & Surg.* Oct. 1888, 34 pp. 30 figs.; *Blas. Ornis*, 1888, p. 317; *Everett, List B. Born.* p. 199 (1889) [Balabac, Palawan]; *Sharpe, Ibis*, 1890, p. 57 [Palawan].

Gallus ferrugineus, *Blyth, Ann. Mag. N. H.* xx. p. 387 (1847), i. p. 455 (1848); *id. Cat. Mus. As. Soc.* p. 242 (1849); *Adams, P. Z. S.* 1859, p. 185 [S. Cashmere]; *Irby, Ibis*, 1861, p. 234 [Kumaon]; *Jerd. B. Ind.* iii. p. 556 (1863); *Gray, List Gallinæ Brit. Mus.* p. 37 (1867); *Blyth, Ibis*, 1867, p. 154; *Beavan, Ibis*, 1868, p. 381 [Sikhim, Maunbhoom, and Umballah]; *Brooks, Ibis*, 1869, p. 60 [Naini Tal, Almorah]; *Bulger, Ibis*, 1869, p. 170 [Sikhim]; *Swinhoe, Ibis*, 1870, p. 357 [Hainan]; *Gray, Hand-l. B.* ii. p. 261 (1870); *Swinh. P. Z. S.* 1871, p. 399; *Elliot, Mon. Phas.* ii. pl. 32 (1872); *Hume, N. & E. Ind. B.* p. 528 (1873); *Ball, Str. F.* ii. p. 426 (1874) [Chota Nagpur]; *Hume, Str. F.* ii. p. 482 (1874) [Pahpoon, Amherst]; *Blyth & Walden, Cat. Mam. & B. Burma*, p. 149 (1875) [Tonghoo]; *Hume, Str. F.* iii. p. 171 (1875) [Upper Pegu]; *Armstr. Str. F.* iv. p. 338 (1876) [China Bakeer]; *Finsch, P. Z. S.* 1877, p. 780 [Ponapé]; *Hume & Inglis, Str. F.* v. p. 44 (1877) [Cachar]; *Oates, Str. F.* v. p. 164 (1877); *Wardl.-Rams. Ibis*, 1877, p. 468 [Karen-nee]; *David & Oustal. Ois. Chine*, p. 420 (1877) [Cochin China, Hainan]; *Marsh. B. Nest. Ind.* p. 59 (1877); *Hume & Marsh. Game B. Ind.* i. p. 217, pl. (1878); *Anders. B. W. Yunnan*, p. 669 (1878) [E. of Kachin Hills, Upp. Burmah]; *Hume & Davison, Str. F.* vi. pp. 442 & 521 (1878) [Tenasserim]; *Ball, Str. F.* vii. p. 225 (1878) [Ganges to Godaveri]; *Hume, Str. F.* viii. p. 68 (1879) [Malay Peninsula]; *Scully. Str. F.* viii. p. 348 (1879) [Nepal]; *Salvad. Ann. Mus. Civ. Gen.* xiv. p. 251 (1879) [Sumatra]; *Bingham, Str. F.* ix. p. 195 (1880) [Thoungyeen Valley]; *Fasson, Str. F.* ix. p. 205 (1880) [Chittagong]; *Müll. J. f. O.* 1882, p. 432 [Salanga Is.]; *Kelham, Ibis*, 1882, p. 1 [W. Malay Pen.]; *Nichols. Ibis*, 1882, p. 65 [S.E. Sumatra]; *Oates, Str. F.* x. p. 236 (1882) [Pegu]; *id. B. Burmah*, ii. p. 322 (1883) [Siam]; *Nichols. Ibis*, 1883, p. 255 [Sumatra]; *Marsh. Ibis*, 1884, p. 423 [Chamba]; *Büttikof. N. Leyd. Mus.* ix. p. 78 (1887) [Padang, W. Sumatra]; *Taylor, Str. F.* x. p. 531 (1887) [Orissa]; *Hume, Str. F.* xi. p. 304 (1888) [Manipur]; *Hartert, J. f. O.* 1889, pp. 379, 434; *Tegetm. Ibis*, 1890, p. 304 [Domestic Breeds]; *Oates, ed. Hume's Nests & Eggs*, iii. p. 417 (1890).

*Adult male**. Top of the head and mantle dark orange or orange-red, shading into orange or yellowish orange towards the extremities of the longer hackles†; feathers on the lower part of the mantle hidden by the hackles and lesser coverts round the bend of the wing black more or less glossed with green or purplish blue; scapulars, median wing-coverts, and lower back dark maroon-red, shading into orange or orange-red on the long hackles which represent the rump-feathers and shorter upper tail-coverts: secondary-coverts black glossed with purplish green; quills black, the outer margins of the primaries cinnamon and the outer half of the outer webs of the secondaries chestnut or deep rufous brown; fore part of the neck, chest, and rest of underparts black, slightly glossed with green; longer upper tail-coverts and tail glossed with green or purplish green. Bill dark brown; emarginate comb and wattles crimson or red; ear-lappets generally white or pinkish white in Indian birds, red in Burmese and Malayan specimens; naked skin on the sides of the head, chin, throat, and fore part of neck paler red; legs and feet slaty. Total length 29 inches, wing 9·5, tail 14, tarsus 3·1.

Immature males have the hackles of the mantle much paler than in the majority of adult birds and mostly with dark shaft-stripes; the chestnut part of the outer webs of the secondaries finely mottled with black nearly to the margins; the feathers underlying the hackles of the mantle dull brownish black without any green gloss, and the comb and wattles rudimentary.

Adult female. Top of the head rust-red, shading into orange on the neck and pale yellow on the upper mantle, each feather with a wide black stripe down the centre; rest of the upper parts pale reddish brown, finely mottled with black and with pale shafts; quills blackish brown, the outer half of the outer webs of the secondaries mottled with pale reddish brown; fore part of neck chestnut; chest and breast pale light red, shading into pale reddish brown on the sides, flanks, and belly, each feather with a pale shaft; under tail-coverts brownish black; tail-feathers like the secondaries, the centre pair of feathers mottled on the margins of both webs and the outer pairs on the outer web with pale rufous. Soft parts much the same as those of the male; the comb in very much smaller, and the wattles are absent. Total length 16·5 inches, wing 7·5, tail 5·5, tarsus 2·4.

Hab. The jungles of North-eastern and parts of Central India, ranging south through the Malay Peninsula, east through Siam to Cochin China and Hainan; it also occurs in a wild state in Sumatra, Java, Lombock, Timor, Celebes, Palawan, and the Philippines.

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* In June the hackles and long tail-feathers are moulted both in this and the following species, and the former are replaced by short black feathers. A second moult takes place in September, and the short feathers of the neck are again replaced by hackles and the long tail-feathers reappear.

† There is considerable variation in the colours of the hackles covering the mantle and rump and other parts of the plumage in different specimens, but these differences appear to be merely individual and are not dependent on locality.

a. ♂ imm. sk.	India.	Gould Coll.
b. ♂ ad. sk.	India.	Major-General Hardwicke [P.].
c–f. ♂ ♀ ad. et imm. sk.	Umballah, Oct., Nov. (*R. C. Beavan*).	Tweeddale Coll.
g. ♂ ad. sk.	Saharunpur Distr.	Hume Coll.
h,i. ♂ ad. et imm. sk.	Sewalik Range.	Hume Coll.
k–m. ♂ ♀ ad. sk.	Dehra Dhoon, Dec., Jan. (*G. King*).	Hume & Tweeddale Colls.
n. ♂ imm. sk.	Kalsi (*G. F. L. Marshall*).	Hume Coll.
o–r. ♂ ♀ ad. et imm. sk.	Kumaon (*Capt. Strachey*).	India Museum [P.].
s–u. ♂ ♀ ad. sk.	Kumaon.	Hume & Tweeddale Colls.
v. Pull. sk.	Oudh, Sept.	Hume Coll.
w–f'. ♂ ♀ ad. et pull. sk.	Nepal.	B. H. Hodgson, Esq. [C.].
g'–l'. ♂ ♀ ad.* sk.	Native Sikhim, Feb., March, July, Dec. (*L. Mandelli*).	Hume Coll.
m'–x'. ♂ ♀ ad., imm., et juv. sk.	Sikhim, April, May, July, Sept., Nov. (*L. Mandelli*).	Hume Coll.
y'. ♂ ad. sk.	Sikhim Terai, April (*H. J. Elwes*).	Tweeddale Coll.
z'–c''. ♂ ♀ ad. sk.	Darjeeling, April.	Hume Coll.
d'', e''. ♂ ♀ ad. sk.	Assam (*Griffith*).	India Museum [P.].
f''–h''. ♂ ♀ ad. sk.	North Khasia Hills, Feb., March (*A. W. Chemnell*).	Tweeddale Coll.
i'', k.'' ♂ ♀ ad. sk.	Dollah, Assam, April, May (*J. Cockburn*).	Hume Coll.
l''–n''. ♂ ♀ ad. sk.	Sadhya, Assam, March, April (*J. Cockburn*).	Hume Coll.
o'', p''. ♂ ♀ ad. sk.	Cachar (*J. Inglis*).	Hume Coll.
q''. ♂ ad. sk.	Bengal.	Gould Coll.
r''–v''. ♂ ♀ ad. et imm. sk.	Raipur, Jan.	Hume Coll.
w''. Pull. sk.	British Burma (*H. Feilden*).	Tweeddale Coll.
x''–a³. ♂ ♀ ad. et imm. sk.	British Burma.	Capt. S. Pinwill [P.].
b³. ♂ ad. sk.	San-g-yewa, British Burma, Dec. (*R. G. W. R.*).	Tweeddale Coll.
c³–f³. ♂ ♀ ad. sk.	Eastern Pegu Hills, March, April (*E. W. Oates*).	Hume Coll.
g³–k³. ♂ ♀ ad. et imm. sk.	Tonghoo, Feb., March, Nov., (*R. G. W. R.*).	Tweeddale Coll.
l³. ♀ ad. sk.	North of Rangoon, May.	Hume Coll.
m³–o³. ♂ ♀ ad. sk.	Tenasserim, Jan. (*W. Limborg*).	Hume & Tweeddale Colls.
p³, q³. ♂ ad. sk.	Pahpoon, Jan. (*W. Davison*).	Hume Coll.
r³, s³. ♂ ad. et pull. sk.	Kaukaryit, April, June (*C. T. Bingham*).	Hume Coll.
t³. ♂ juv. sk.	Thoungyeen, June.	Major Bingham [P.].
u³. ♀ ad. sk.	Amherst, March (*W. Davison*).	Hume Coll.
v³. ♀ ad. sk.	Tavoy, April (*W. Davison*).	Hume Coll.
w³, x³. ♂ ♀ ad. sk.	Bankasoon, May, Dec. (*W. Davison*).	Hume Coll.

* One a female assuming male plumage.

y^3, z^3. ♀ pull. sk.	Malewoon, March (*W. Davison*).	Hume Coll.
a^4–d^4. ♂ ♀ ad. sk.	Salang, Feb., March (*J. Darling*).	Hume Coll.
e^4. ♀ ad. sk.	Taroar, Feb. (*J. Darling*).	Hume Coll.
f^4. ♂ imm. sk.	Province Wellesley (*Cantor*).	India Museum [P.].
g^4–j^4. ♂ ♀ ad. sk.	Malacca (*Cantor*).	India Museum [P.].
k^4. ♂ ad. sk.	Malacca.	Zool. Soc. Coll.
l^4. ♂ ad. sk.	Malacca (*Dr. Maingay*).	Tweeddale Coll.
m^4, n^4. ♂ ♀ ad. sk.	Malacca.	Capt. S. Pinwill [P.].
o^4. ♀ ad. sk.	Malacca.	Wallace Coll.
p^4. ♂ ad. sk.	Malacca, July (*W. Davison*).	Hume Coll.
q^4. ♀ ad. sk.	Saigon, Cochin China, May.	M. E. Pierre [P.].
r^4. ♀ imm. sk.	Sumatra.	Wallace Coll.
s^4, t^4. ♂ ad. et imm. sk.	Java (*Horsfield*).	India Museum [P.].
u^4, v^4. ♂ ♀ ad. st.	Java.	Purchased.
w^4. ♀ ad. sk.	Java.	Tweeddale Coll.
x^4. ♀ imm. sk.	West Java.	F. Nicholson, Esq. [P.].
y^4. ♂ ad. sk.	East Java.	Wallace Coll.
z^4, a^5. ♂ ad. sk.	Lombock.	Wallace Coll.
b^5. ♂ ad. sk.	East Timor.	Wallace Coll.
c^5–e^5. ♂ ♀ ad. sk et ♂ imm. st.	Philippine Islands.	H. Cuming, Esq. [C.].
f^5, g^5. ♂ ♀ ad. sk.	Luzon, Jan., April (*A. B. Meyer*).	Tweeddale Coll.
h^5. ♂ ad. sk.	Guimaras, March (*A. B. Meyer*).	Tweeddale Coll.
i^5–l^5. Pull. sk.	Cebu, March (*A. H. Everett*).	Tweeddale Coll.
m^5–o^5. ♂ ♀ ad.* sk.	Basilan, May (*A. H. Everett*).	Tweeddale Coll.
p^5. ♂ ad. sk.	Zamboanga, March (*A. H. Everett*).	Tweeddale Coll.
q^5. Skeleton.	Java.	
r^5. Imperfect skel.	Nepal.	B. H. Hodgson, Esq. [P.].
s^5–u^5. Skeletons [*G. domesticus* (Kulm Fowl)].		
v^5. Sternum [*G. domesticus* (Bantam)].		
w^5–z^5. Skulls.		Dr. Günther [P.].

Hybrid between Gallus domesticus *and* Crax alberti.

Crax alberti × Gallus domesticus, *Aquarone, Bull. Soc. d'Acclim.* 1869, p. 357.

2. Gallus lafayetti.

Gallus lafayetii, *Less. Traité d'Orn.* p. 491 (1831); *Gray, Gen. B.* iii. p. 499 (1845); *id. List Gallinæ Brit. Mus.* p. 39 (1867).

Gallus stanleyi, *J. E. Gray, Ill. Ind. Zool.* i. pl. 43. fig. 1 (1830–32); *Blyth, Cat. Mus. As. Soc.* p. 243 (1849); *Layard, Ann. Mag. N. H.* (2) xiv. p. 62 (1854); *Sclat. List of Phas.* p. 10 (1863); *Blyth, Ibis*, 1867, pp. 154, 307; *Gray, Hand-l. B.* ii. p. 261 (1870); *Holdsw. P. Z. S.* 1872, p. 468; *Legge, Ibis*, 1875, p. 400; *Hume & Marsh. Game B. Ind.* i. pl. (1878).

Gallus lafayettii, *Des Murs, Icon. Orn.* pl. 18 (1849); *Elliot, Mon. Phas.* ii. pl. 33 (1872); *Hume, N. & E. Ind. B.* p. 530 (1873);

* One a female assuming male plumage.

Hume & Marsh. Game B. Ind. i. p. 241, pl. (1878); *Hume, Str. F.* vii. p. 429 (1878); *Legge, B. Ceyl.* iii. p. 736, pl. (1880); *Oates, ed. Hume's Nests & Eggs*, iii. p. 422 (1890).

Adult male. Top of the head rufous orange; hackles on the back and sides of the neck, upper part of the mantle, and lesser wing-coverts golden orange, with a black band down the middle; lower part of the mantle, scapulars, and median wing-coverts orange-red, with a dark maroon centre stripe; lower back and rump bright orange-red, the terminal half of each feather with a large triangular spot of rich glossy violet and narrowly margined with black; upper tail-coverts glossed with purple and blue; primaries brownish black, lightest on the outer web; secondaries black, slightly glossed with purplish blue; greater coverts black, more or less mixed or margined on the outer web with dark chestnut; feathers at the base of the naked throat rich glossy violet; chest, breast, and sides like the lower part of the mantle; feathers of the belly chestnut, mottled and tipped with black; flanks, thighs, and under tail-coverts mostly black; tail black glossed with purplish blue. Comb, wattles, and naked skin about the head yellowish or purplish red, the former with a large oval yellow spot on the middle of the posterior half. Bill brown; feet and legs pale yellow. Total length 30 inches, wing 9, tail 11, tarsus 3.

In a *young male* the greater part of the plumage above is dark chestnut, the glossy violet spots on the lower back and rump are present, also some median wing-coverts like those of the adult male; all the secondaries and secondary-coverts are blackish brown, finely mottled with chestnut, except the second quill, which is barred with buff like that of the female. The chest and breast are chestnut, with here and there an adult feather. The tail is much like that of the female, but the two outer pairs of feathers are black.

In an *immature* male some of the outer secondaries have their inner webs and extremities finely mottled with rufous, otherwise the plumage is like that of the adult.

Adult female differs chiefly from the female of *G. gallus* in the following points:—The fringes to the feathers of the neck and upper mantle are darker, more rufous, and not so wide; the secondaries are black, irregularly barred with buff; the feathers of the chest and sides are black, mottled with rufous buff and with whitish shaft-stripes; the breast and rest of the underparts are white, irregularly barred and margined with black; and the tail-feathers are black, thickly mottled with rufous. Comb very small; no wattles; facial skin not quite so naked as in *G. gallus*. Total length 17 inches, wing 7·5, tail 4·9, tarsus 2·4.

An *immature female* has much less white about the chest and the tips of the wing-feathers are mottled with pale rufous.

Hab. Ceylon.

a, b. ♂ ♀ ad. st.	Ceylon.	Purchased.
c. ♂ ad. sk.	Ceylon.	Dr. Kelaart [P.].
d. ♂ ad. sk.	Ceylon.	Purchased.
e–g. ♂ ♀ ad. sk.	Ceylon (*Nevill*).	Tweeddale Coll.

h–k. ♂ ad. et ♂ ♀ imm. sk.	Ceylon.	Hume Coll.
l, *m*. ♂ ad. sk.	Ceylon.	Tweeddale Coll.
n–s. ♂ ♀ ad. et imm. sk.	West Province, Ceylon, Nov. & Dec. (*Hart*).	Hume Coll.
t–b'. ♂ ♀ ad. et imm. sk.	N.E. Province, Ceylon, May, July, Oct., Dec. (*Hart*).	Hume Coll.
c'. ♂ ad. sk.	Trincomalee, Nov. 6.	Col. W. V. Legge [P.].

3. Gallus sonnerati.

Coq et Poule sauvage des Indes, *Sonn. Voy. Ind. Orient.* ii. p. 148, pls. 94, 95 (1782).

Wild Cock, *Lath. Gen. Syn.* ii. p. 698 (1783).

Phasianus gallus, *Scop.* (*nec Linn.*) *Del. Flor. et Faun. Insubr.* pt. ii. p. 93 (1786); *Gm. S. N.* i. pt. ii. p. 737 (1788); *Lath. Ind. Orn.* ii. p. 625 (1790); *Bonnat. Tabl. Encycl. Méth.* i. p. 180, pl. 86. figs. 4, 5 (1791).

Sonnerat's Wild Cock, *Lath. Gen. Hist.* viii. p. 181 (1823).

Gallus sonneratii, *Temm. Pig. et Gall.* ii. p. 246 (1813), iii. p. 659 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 200, pl. 12 (1819); *Temm. Pl. Col.* v. pls. 1 & 2 [nos. 232, 233] (1823); *Vieill. Gal. Ois.* ii. p. 26 (1825); *Griff. ed. Cuv.* iii. p. 19 (1829); *Less. Traité d'Orn.* p. 492 (1831); *Sykes, P. Z. S.* 1832, p. 151 [W. Ghauts]; *Schinz, Nat. Abbild. Vög.* p. 243, pl. 94 (1833); *Jard. Nat. Lib., Orn.* p. 186, pls. xi. & xii. (1834); *Gray, List of B.* pt. iii. *Gall.* p. 27 (1844); *id. Gen. B.* iii. p. 499 (1845); *Blyth, Ann. Mag. N. H.* xx. p. 388 (1847), i. p. 455 (1848); *id. Cat. Mus. As. Soc.* p. 243 (1849); *Schinz, Nat. Vög.* p. 145, pl. 69 (1853); *Burgess, P. Z. S.* 1855, p. 29; *Sacc, Rev. Zool.* (2) xiv. p. 11, pl. 3 (1862); *Jerd. B. Ind.* iii. p. 539 (1863); *Sclat. List of Phas.* p. 10 (1863); *Bulger, P. Z. S.* 1866, p. 571 [Nilghiris]; *Gray, List Gallinæ Brit. Mus.* p. 39 (1867); *Blyth, Ibis*, 1867, pp. 154, 307; *Gray, Hand-l. B.* ii. p. 261 (1870); *Elwes, Ibis*, 1870, p. 528 [Cardamum Hills]; *Elliot, Mon. Phas.* ii. pl. 34 (1872); *Lloyd, Ibis*, 1873, p. 401 [S. Konkan]; *Hume, N. & E. Ind. B.* p. 531 (1873); *Butl. Str. F.* iv. p. 5 (1876) [N. Guzerat and Aboo]; *Fairb. Str. F.* iv. p. 262 (1876) [Khandala to Goa]; *Hume, Str. F.* iv. p. 404 (1876) [Travancore]; *Butl. Str. F.* v. p. 222 (1877); *Fairb. Str. F.* v. p. 409 (1877) [Palani Hills]; *Marsh. B. Nest. Ind.* p. 59 (1877); *Gould, B. Asia*, vii. pl. 56 (1877); *Hume & Marsh. Game B. Ind.* i. p. 231, pl. (1878); *Davidson & Wend. Str. F.* vii. p. 86 (1878) [Deccan]; *Butl. Cat. B. Sind*, p. 53 (1879) [Aboo]; *McInroy, Str. F.* viii. p. 493 (1879) [Mysore]; *Vidal, Str. F.* ix. p. 76 (1880) [S. Konkan]; *Butler, Str. F.* ix. p. 205 (1880) [Belgaum], p. 421 (1880) [Deccan and S. Mahratta]; *Davidson, Str. F.* x. p. 316 (1882) [W. Khandeish]; *Davison, Str. F.* x. p. 409 (1883) [Nilghiris, Wynaad, and S. Mysore]; *Swinh. & Barnes, Ibis*, 1885, p. 131 [Central India]; *Taylor, Str. F.* x. p. 464 (1887) [Manzeerabad, Mysore]; *Terry, Str. F.* x. p. 479 (1887) [Palani Hills]; *Oates, ed. Hume's Nests & Eggs*, iii. p. 420 (1890).

Phasianus indicus, *Leach, Zool. Misc.* ii. p. 6, pl. 61 (1815).

Adult male. Hackles covering the top of the head, back and sides of the neck, and upper part of mantle black, fringed with grey, barred with white, and with a yellowish spot like sealing-wax at the extremity; the longer hackles are glossed with purple; shorter

upper tail-coverts bronze-purple, longer ones purplish blue, greenish at the margin; rest of the feathers of the back and rump and lesser coverts at the bend of the wing black, slightly glossed with purple, edged with grey, and with narrow white shaft-stripes; the longer rump-feathers are fringed with reddish orange at the extremity and ornamented with yellow wax-like spots; median wing-coverts and scapulars black, with narrow yellowish-white shaft-stripes dilating at the extremity into large oblong orange-yellow wax-like spots, fringed externally with orange-red; quills and their coverts brownish black. Underparts like the lower back; flank-feathers fringed at the extremity with reddish orange; lower part of belly and vent mixed with buff; tail black, glossed with bluish green. Comb, wattles, and naked skin on sides of face, chin, and throat red; bill horny brown; legs and feet yellowish red. Total length 28 inches, wing 9, tail 16·2, tarsus 3·1.

Adult female. Differs chiefly from the female of *G. lafayetti* in the following points:—All the feathers of the neck and mantle have well-marked rufous or buff shaft-stripes, the outer webs of the secondaries are finely mottled with sandy brown and black, and the breast-feathers are devoid of the thick black cross-bars; the sides of the head are covered with small feathers. Comb, which is very small, and naked skin round eye and on sides of throat red. Total length 16·5 inches, wing 7·9, tail 5·2, tarsus 2·7.

Hab. Western, Southern, and Central India, bounded on the north-east by the valley of the Godaveri, and on the north-west by the Aravalli Hills.

a–g. ♂ ♀ ad. et pull. sk.	Mt. Aboo, April, June, July (*A. O. H. & G. King*).	Hume Coll.
h–k. ♂ ♀ ad. sk.	Deccan.	India Museum [P.].
l. ♂ imm. sk.	Khandeish.	Major Walcott, R.A. [P.].
m, n. ♂ ♀ ad. sk.	Godra, Bombay.	Major Walcott, R.A. [P.].
o. ♂ ad. sk.	S. of Godavery R., near Badrachellum, Feb. (*W. T. Blanford*).	Hume Coll.
p–t. ♂ ♀ ad. sk.	Belgaum, Feb., April, May (*E. A. Butler*).	Hume Coll.
u, v. ♂ ad. sk.	Mysore, April (*W. Davison*).	Hume Coll.
w. ♂ ad. sk.	Mysore.	W. Davison, Esq. [P.].
x. ♀ ad. sk.	Segore, Feb. (*W. Davison*).	Hume Coll.
y–b′. ♂ ♀ ad. sk.	Madras, April (*W. Davison*).	Hume Coll.
c′, d′. ♂ ad. et imm. sk.	Wynaad, April (*W. Davison*).	Hume Coll.
e′–k′. ♂ ♀ ad. et imm. sk.	Ootacamund, Jan.–March (*W. Davison*).	Hume Coll.
l′–n′. ♂ ♀ ad. et imm. sk.	Kotagherry, Feb., March (*J. Cockburn*).	Hume Coll.
o′, p′. ♂ ♀ ad. sk.	Coonor, Jan. (*W. Davison*).	Hume Coll.
q′, r′. ♂ ♀ ad. sk.	Ramghaut, Jan. (*Neville*).	Tweeddale Coll.
s′, t′. ♀ ad. sk.	No locality.	Gould Coll.
u′. ♂ juv. sk.	No locality.	Purchased.
v′, w′. Skeletons.		

4. Gallus varius.

Phasianus varius, *Shaw & Nodd. Nat. Misc.* x. pl. 353 [text].
Gallus varius, *Griff. ed. Cuv.* iii. p. 21 (1829); *Less. Traité d'Orn.* p. 492 (1831); *Gray, List of B.* pt. iii. *Gall.* p. 27 (1844); *id. Gen. B.* iii. p. 499 (1845); *Sclat. List of Phas.* p. 10 (1863); *Blyth, Ibis*, 1867, pp. 307, 308; *Gray, List Gallinæ Brit. Mus.* p. 40 (1867); *id. Hand-l. B.* ii. p. 261 (1870); *Elliot, Mon. Phas.* ii. pl. 35 (1872); *Kelham, Ibis*, 1881, p. 3 [Singapore ?]; *Hume, Str. F.* x. p. 68 (1887) [Johore, Malay Pen.].
Gallus furcatus, *Temm. Pig. et Gall.* ii. p. 261 (1813), iii. p. 662 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 215 (1819); *Vieill. Tabl. Encycl. Méth.* i. p. 364 (1823); *Temm. Pl. Col.* v. pl. 4 [no. 483] (1829); *Gray, Ill. Ind. Zool.* i. pl. 43. fig. 2 (1830–32); *Schinz, Nat. Abbild. Vög.* p. 242 (1833); *Jard. Nat. Lib., Orn.* iv. p. 184, pl. x. (1834); *Schinz, Nat. Vög.* p. 145 (1853); *Wallace, P. Z. S.* 1863, p. 486 [Lombock, Flores].
Gallus javanicus, *Horsf. Tr. Linn. Soc.* xiii. p. 185 (1822) [Java].

Adult male. Top of the head, back and sides of the neck, and upper part of the mantle covered with short truncate feathers, somewhat curved at the extremity, black at the base, shading into purplish blue edged with golden green near the extremity, and margined with purplish or greenish bronze and fringed with black; lower part of the mantle golden green shot with blue, shading into violet-bronze towards the extremity and margined with black; hackles of the lower back and rump long and black, narrowly margined all round with golden yellow; shorter upper tail-coverts the same, but some have the centre part glossed with bluish green; lesser and median wing-coverts elongate and reddish orange, with a wide black stripe down the middle; quills and greater coverts black, slightly glossed with bluish green; chest and rest of underparts black, somewhat mixed with buff towards the vent; longer upper tail-coverts and tail black, glossed with bluish green. Upper margin of the comb entire, a single wattle down the middle of the throat; sides of the head and lores naked, with only a few tiny isolated plumes. All the naked parts are scarlet; the comb and wattle green, yellow, and scarlet; bill horn-colour; feet and legs flesh-colour. Total length 28 inches, wing 9, tail 11·2, tarsus 2·9.

In an *immature male* the secondaries and secondary-coverts are margined and mottled with buff, and the comb, wattle, and spurs are rudimentary.

Adult female. Top of the head, neck, and upper part of the mantle sandy brown, the feathers of the latter with submarginal blackish bands and dusky centre stripes; rest of the upper parts, secondaries, and secondary-coverts black, slightly glossed with green and irregularly barred and margined at the extremity with buff; primary-quills and coverts dark brown; lores, superciliary stripes, and sides of the face pale buff; chin and throat white; underparts buff, the chest-feathers with brownish margins and the sides and flanks with blackish mottlings; tail black, irregularly edged with buff. Total length 15·3 inches, wing 7·7, tail 4·5, tarsus 2·3.

Hab. Java, Lombock, and Flores (said to have been obtained wild near Singapore).

a, b. ♂ ♀ ad. st.	Java.	India Museum [P.].
c, d. ♂ ad. sk.	Java.	Gould Coll.
e. ♂ imm. sk.	Java.	India Museum [P.].
f, g. ♂ ♀ ad. sk.	East Java.	Wallace Coll.
h. ♂ ad. sk.	[Singapore] (*Cantor*).	India Museum [P.].
i. ♀ ad. sk.	[China].	J. R. Reeves, Esq. [P.].
k. ♂ ad. sk.	No locality.	

38. POLYPLECTRON *.

	Type.
Polyplectron, *Temm. Pig. et Gall.* ii. p. 363 (1813) ..	P. chinquis.
Diplectron, *Vieill. Analyse*, p. 50 (1816)	P. chinquis.
Polyplectrum, *Less. Traité d'Orn.* p. 487 (1831)	P. chinquis.
Diplectrum, *Agass. Index Universalis*, p. 125 (1846)..	P. chinquis.
Diplectropus, *Gloger, Hand- u. Hilfsb.* p. 382	P. chinquis.
Emphania, *Reichenb. Nat. Syst. Vög.* p. xxix (1852) .	P. napoleonis.

Tail composed of 20 to 24 feathers, large, full, and rounded, the middle pair twice as long as the outer pair and each ornamented with one or a pair of metallic ocelli.

1st primary much shorter than the 2nd; 2nd shorter than the 10th; 6th slightly the longest.

Sides of the face naked or very nearly so.

Tarsus longer than middle toe and claw, and armed in the male with generally two and sometimes three spurs on each leg.

Range. Indo-Chinese countries, from Sikhim to Cochin China, throughout the Malay Peninsula, Sumatra, Borneo, Palawan, and ? Philippines.

Key to the Species.

I. Mantle and wing-coverts ornamented with brilliant round metallic ocelli or with the terminal portion of each feather metallic. (*Males.*)

A. Breast and belly brown, thickly spotted and mottled with dirty white or buff.

a. Outer tail-feathers with well-developed metallic ocelli on the inner as well as the outer webs.

a'. Ocelli green or bluish green, with blue and violet reflections. Facial skin pale fleshy yellow, throat white ..... *chinquis*, p. 354.

b'. Ocelli golden green, with bluish-violet reflections. Facial skin crimson; no white throat ..... *germaini*, p. 357.

b. Outer tail-feathers with no ocelli on the inner web ..... *bicalcaratum*, p. 357.

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* Doubtful species:—*Perdix concentrica*, J. E. Gray, Ill. Ind. Zool. i. pl. 53. fig. 1 (1830-32).

B. Breast and belly black, or black with a few minute buff dots.
c. Mantle and wing-coverts with round metallic ocelli; middle of chest white like the chin and throat ..... *schleiermacheri*, p. 359.
d. Mantle and wing-coverts with the terminal portion of each feather metallic; chin, throat, and rest of underparts black.
c'. White superciliary stripe very narrow or absent..... *nehrkornæ*, p. 360.
d'. Wide white superciliary stripes continued over the back of the head and confluent on the nape ..... *napoleonis*, p. 361.
II. Mantle and wing-coverts without ocelli or with only rudimentary traces. (*Females.*)
C. Outer tail-feathers with metallic ocelli on the inner as well as the outer webs.
e. Mantle and longer upper tail-coverts without any trace of metallic ocelli.. *chinquis*, p. 354.
f. Mantle with rudimentary dark greenish-blue ocelli; most of the longer upper tail-coverts with pairs of well-marked ocelli ..... *germaini*, p. 357.
D. Outer tail-feathers with ocelli on the outer web only.
g. Longer upper tail-coverts with pairs of well-marked ocelli; each feather of the mantle with a black subterminal blotch ..... *bicalcaratum*, p. 357.
h. Longer upper tail-coverts without ocelli.
e'. Each feather of the mantle with a black subterminal blotch ..... *schleiermacheri*, p. 359.
f'. Mantle without subterminal black blotches ..... *nehrkornæ*, p. 360, and probably *napoleonis*, p. 361.

1. Polyplectron chinquis.

Peacock Pheasant from China, *Edw. Nat. Hist. B.* ii. pl. 67 (1747).
Le Paon du Tibet, *Briss. Orn.* i. p. 294 (1760).
L'Éperonnier, *D'Aubent. Pl. Enl.* pl. 492 [mâle]; *Buff. Hist. Nat. Ois.* ii. p. 368 (1771).
Le Chinquis, *Buff. Hist. Nat. Ois.* ii. p. 365 (1771).
Pavo chinquis, *Müll. Suppl. to Linn. S. N.* p. 121 (1776).
Iris Peacock, *Lath. Gen. Syn.* ii. p. 673 (1783); *id. Gen. Hist.* viii. p. 118 (1823) [part].
Pavo tibetanus, *Gm. S. N.* i. pt. ii. p. 731 (1788); *Lath. Ind. Orn.* ii. p. 617 (1790); *Bonnat. Tabl. Encycl. Méth.* i. p. 179, pl. 83. fig. 3 (1791).
Pavo bicalcaratus, *Lath. Ind. Orn.* ii. p. 617 (1790); *Shaw, Mus. Lever.* p. 73, pl. (1792).
Pavo iris, *Bonnat. Tabl. Encycl. Méth.* i. p. 178, pl. 83. fig. 2 (1791).
Polyplectron chinquis, *Temm. Pig. et Gall.* ii. p. 363 (1813), iii. p. 675 (1815) [part]; *id. Pl. Col.* v. pl. 17 [no. 539] (1831); *Schinz, Nat. Abbild. Vög.* p. 254 (1833); *Jard. Nat. Lib., Orn.* iv. pl. vi. (1834); *Less. Comp. de Buff.* vii. p. 319 (1836); *Blyth, Cat.*

Mus. As. Soc. p. 241 (1849); *Schinz, Nat. Vög.* p. 154, pl. 75 (1853); *Swinh. P. Z. S.* 1863, p. 307 * [S. China]; *Sclat. List of Phas.* p. 12 (1863); *Gould, B. Asia,* vii. pl. 50 (1871); *v. Pelz. Ibis,* 1873, p. 119; *Blyth & Walden, Cat. Mamm. & B. Burma,* p. 148 (1875) [Sylhet, Assam, Tenasserim prov.]; *Hume & Inglis, Str. F.* v. p. 40 (1877) [Cachar]; *Sclat. P. Z. S.* 1879, pl. viii. fig. 2.

Diplectron tibetanus, *Vieill. N. Dict. d'Hist. Nat.* x. p. 313 (1817).

The Thibet Peacock, *Lath. Gen. Hist.* viii. p. 120 (1823).

Diplectron bicalcaratus, *Vieill. Gal. des Ois.* ii. p. 17 [part], pl. 203 (1825); *Schinz, Nat. Abbild. Vög.* pl. 93 (1833).

Polyplectron albocellatum (*Temm.*), *Cuv. Règ. Anim.* i. p. 474 (1829); *Griff. ed. Cuvier,* iii. p. 13 (1829).

Polyplectrum albo-ocellatum, *Less. Traité d'Orn.* p. 487 (1831).

Polyplectron tibetanus, *Jard. Nat. Lib., Orn.* iv. p. 161 (1834).

Polyplectron tibetanum, *Gray, Gen. B.* iii. p. 495 (1845); *Elliot, Mon. Phas.* i. pl. 6 (1872); *Hume & Marsh. Game B. Ind.* i. p. 105, pl. (1878); *Fasson, Str. F.* ix. p. 203 (1880) [Chittagong]; *Hume, Str. F.* xi. p. 300 (1888) [Manipur, Arrakan]; *Cripps, Str. F.* xi. p. 301 (1888) [E. Assam]; *Hartert, Kat. Mus. Senckenb.* p. 198 (1891).

Polyplectron atelospilum, *Gray, List Gallinæ Brit. Mus.* p. 24 (1867) [Laos Mountains]; *id. Hand-l. B.* ii. p. 257 (1870).

Polyplectron cyclospilum, *Gray, List Gallinæ Brit. Mus.* p. 23 (1867) [N.E. India]; *id. Hand-l. B.* ii. p. 256 (1870).

Polyplectron enicospilum, *Gray, List Gallinæ Brit. Mus.* p. 24 (1867) [N.E. India]; *id. Hand-l. B.* ii. p. 257 (1870).

Polyplectron bicalcaratum, *Swinh. P. Z. S.* 1871, p. 398 [S.W. China].

? Polyplectron intermedius, *Hume, Str. F.* i. p. 36 (1873) [Looshaie Country], & v. p. 118 (1877); *Elliot, Ibis,* 1878, p. 124.

Polyplectron thibetanum, *Hume & Davison, Str. F.* vi. pp. 432, 521 (1878) [North and Central Tenasserim]; *Bingham, Str. F.* ix. p. 195 (1880) [Thoungyeen Valley and Sinzaway]; *Oates, B. Burmah,* ii. p. 315 (1883) [Arrakan].

Polyplectron helenæ, *Oates, Ibis,* 1883, p. 136, pl. v. (immature) [Upper Burma]; *id. B. Burmah,* ii. p. 316 (1883).

Adult male. Feathers of the top of the head rather elongate, hairy, and mottled with black and white; feathers of the neck barred with brownish white and brown, those on the back soft and somewhat downy; all the rest of the upper parts brown, irregularly dotted all over with dirty white; nearly every feather of the mantle, scapulars, lesser and median wing-coverts, outer secondaries and their coverts with a large, round, subterminal metallic ocellus of dark green, shading into violet exteriorly and with purple and blue reflections; each spot is edged with successive rings of black, brown, and dirty white; longer upper tail-coverts and all the tail-feathers with *pairs* of ocelli, very similar to the above, but situated one on each side of the shaft at some distance from the extremity; these spots are more oval in shape than those on the wings, and are entirely green in one light and purple in

* There are now no specimens from Southern China in the Collection, and I cannot find any record of any ever having been there.

another; the dirty white ring surrounding each is imperfect exteriorly, and disappears into the brown of the feather; the primaries are faintly dotted with buff on the outer web and uniform brown on the inner; sides of the head almost entirely naked; chin and throat thinly covered with white feathers; rest of underparts brown, with irregular mottled and dotted bars of dirty white. Facial skin pale fleshy yellow; bill black, except basal part of lower mandible which is yellow; legs and feet blackish. Total length 25·6 inches, wing 8·4, tail 13·2, tarsus 3.

In an *immature male* the plumage resembles that of the female, but the ocelli on the mantle, scapulars, wing-coverts, and secondaries are mostly irregularly represented by somewhat obscure dark green and violet spots, the latter colour predominating; the rings of dirty white enclosing the ocelli are represented by irregular dots.

Adult female. The top of the head and neck brown, the latter obscurely barred with paler brown and white dots situated at the tips of the shafts; rest of the upper parts brown mottled with pale brown; the ocelli on the mantle, &c., of the male are represented by black spots more or less glossed, especially on the outer secondaries, with violet and purple; the tip of each feather is thickly mottled with dirty white; the feathers of the back and rump have white shafts and a few scattered whitish dots; the ocelli on the longer tail-coverts are absent and are only obscurely represented on the outer pairs of tail-feathers, not, as a rule, on the middle pairs, which have only dark spots; chin and throat white; rest of underparts brown, finely mottled with whitish buff, under tail-coverts the same. Facial skin pale fleshy yellow; bill horny brown; legs and feet very dark plumbeous. Total length 19 inches, wing 7·1, tail 8, tarsus 2·4.

An *immature female* has the outer secondaries and longer scapulars margined and mottled with rufous and the outer webs of the secondaries are dotted with pale rufous.

Hab. Indo-Chinese countries, ranging in the north-west to Sikhim, eastward to the Laos country, and southwards through Tenasserim as far as Mergui.

a. ♂ ad. sk.	N.E. India.	J. R. Reeves, Esq. [P.]. (Type of *P. cyclospilum*, Gray.)
b. ♂ ad. sk.	N.E. India.	J. R. Reeves, Esq. [P.]. (Type of *P. enicospilum*, Gray.)
c, *d.* ♂ ad. sk.	Darjeeling.	Hume Coll.
e. ♂ ad. sk.	Darjeeling.	India Museum [P.].
f–*n.* ♂ ad. et imm. sk.	Bhotan Doars, Feb. to May (*L. Mandelli*).	Hume Coll.
o. ♂ ad. sk.	Buxa Doars, May (*L. Mandelli*).	Hume Coll.
p–*r.* ♂ ad. et imm. sk.	Assam (*A. W. Chennell*).	Tweeddale Coll.
s–*u.* ♂ ad. sk.	Assam.	Purchased.
v. ♂ ad. sk.	Assam (*McClelland*).	India Museum [P.].
w. ♂ ad. sk.	N. Khasia Hills, March (*A. W. Chennell*).	Tweeddale Coll.
x. ♂ imm. sk.	Garo Hills, Feb. (*Godwin-Austen*).	Tweeddale Coll.

y, *z*. ♂ ad. sk.	Cachar (*J. Inglis*).	Hume Coll.
a'. ♀ ad. sk.	Dilkoushah, Cachar.	Hume Coll.
b'. ♂ imm. sk.	Bhamo (*Lowndes*).	E. W. Oates, Esq. [C.]. (Type of *P. helenæ*, Oates.)
c', *d'*. ♂ ♀ ad. sk.	Thoungyah, Tenasserim, Nov. (*J. Darling*).	Hume Coll.
e', *f'*. ♂ ♀ ad. sk.	Mooleyit, Feb. (*W. Davison*).	Hume Coll.
g'. ♂ ad. sk.	Foot of Nwalabo, April (*W. Davison*).	Hume Coll.
h'. ♀ imm. sk.	Mergui, April (*W. Limborg*).	Tweeddale Coll.
i'. ♂ ad. (tail only).*	Laos Mountains.	M. Mouhot [C.]. (Type of *P. atelospilum*, Gray.)

2. Polyplectron germaini.

Hen Peacock Pheasant from China, *Edw. Nat. Hist. B.* ii. pl. 69 (1747).

L'Éperonnier, *D'Aubent. Pl. Enl.* pl. 493 [femelle].

Polyplectron germaini, *Elliot, Ibis*, 1866, p. 56; *id. Mon. Phas.* i. pl. 8 (1872) [Bien-hoa, Cochin China]; *Hume, Str. F.* vii. p. 426 (1878); *Hume & Marsh. Game B. Ind.* i. p. 111 (1878).

Adult male. General colour blackish brown, irregularly spotted with light brown, the spots being much smaller and closer together than in *P. chinquis*. Head and back part of neck black, each feather barred with white; back, wings, and tail covered with metallic spots, in some lights of a dark lustrous green, in others of a rich purple; primaries dark brown. Upper mandible black, lower horn-colour; orbital skin crimson; feet black. Total length 20 inches, wing 7·5, tail 10·5, tarsus 2·5.

Adult female is distinguished from the female of *P. chinquis* by the following characters:—The ocelli on the mantle, scapulars, wing-coverts, and outer secondaries are comparatively well-marked and glossed with dark green, changing to purple and bordered anteriorly, especially on the scapulars and outer secondaries, with narrow Λ-shaped black and buff bands; the extremities of these feathers are not thickly spotted with dirty white; most of the longer upper tail-coverts, like the tail-feathers, carry a pair of dark green ocelli, shot with purple, and situated one on each web. The only specimen examined has only 18 tail-feathers, but no doubt some are missing. Total length 18·6 inches, wing 7·1, tail 8·5, tarsus 2·3.

Hab. Cochin China.

a. ♀ ad. sk.	Cochin China.	M. E. Pierre [P.].
b. ♀ imm. sk.	Bred in captivity.	F. E. Blaauw, Esq. [P.].

3. Polyplectron bicalcaratum.

Le Paon de la Chine, *Briss. Orn.* i. p. 291 (1760).

* The shorter upper tail-coverts have been pulled out and their places supplied by the wing-coverts, scapulars, and outer secondaries.

Pavo bicalcaratus, *Linn. S. N.* i. p. 268 (1766); *Gm. S. N.* i. pt. ii. p. 730 (1788); *Raffl. Tr. Linn. Soc.* xiii. p. 319 (1822) (Sumatra); *Griff. ed. Cuv.* iii. p. 13, pl. (1829).

Le petit Paon de Malaeca, *Sonn. Voy. Ind. Orient.* ii. p. 173, pl. xcix. (1782).

Phasianus malaccensis, *Scop. Del. Flor. et Faun. Insubr.* pt. ii. p. 93 (1786).

Polyplectron chinquis, *Temm.* (*nec Müll.*) *Pig. et Gall.* ii. p. 363 (1813); iii. p. 675 (1815) [part].

Iris Peacock, *Lath. Gen. Hist.* viii. p. 118 (1823) [part].

Diplectron bicalcaratum, *Vieill. Gal. des Ois.* ii. p. 17 [part] (1825).

Polyplectron bicalcaratum, *Vig. in Raffl. Mem.* p. 676 (1830) [Sumatra]; *Temm. Pl. Col.* v. Éperonnier, pp. 2, 6 (1831); *Less. Comp. de Buff.* vii. p. 321 (1836); *Gray, List of B.* pt. iii. *Gall.* p. 22 (1844); *id. Gen. B.* iii. p. 495 (1845); *Blyth, Cat. Mus. As. Soc.* p. 242 (1849); *Sclat. List of Phas.* p. 12, pl. 12 (1863); *Fitz. Atl. Nat., Vög.* fig. 225 (1864); *Gray, List Gallinæ Brit. Mus.* p. 23 (1867); *id. Hand-l. B.* ii. p. 256 (1870); *Gould, B. Asia,* vii. pl. 51 (1870); *Elliot, Mon. Phas.* i. pl. 7 (1872); *Hume, Str. F.* ii. p. 481 (1874) [Tenasserim]; *Hume & Davison, Str. F.* vi. p. 434 (1878) [? Hills of S. Tenasserim]; *Hume & Marsh. Game B. Ind.* i. p. 114, pl. (1878); *Hume, Str. F.* viii. p. 68 (1879) [Malay Pen.]; *Kelham, Ibis,* 1881, p. 531 [Perak]; *Müll. J. f. O.* 1882, p. 432 [Salanga Is.].

Polyplectron hardwickii, *J. E. Gray, Ill. Ind. Zool.* i. pl. 37 (1830–32), ii. pl. 42. fig. 1 (1834); *G. R. Gray, List of B.* pt. iii. *Gall.* p. 22 (1844); *id. Gen. B.* iii. p. 495 (1845); *id. List Gallinæ Brit. Mus.* p. 24 (1867); *id. Hand-l. B.* ii. p. 257 (1870).

Polyplectron lineatum, *J. E. Gray, Ill. Ind. Zool.* i. pl. 38 (1830–32); *G. R. Gray, Gen. B.* iii. p. 495 (1845).

Polyplectrum bicalcaratum, *Less. Traité d'Orn.* p. 487 (1831); *Jard. Nat. Libr., Orn.* iv. p. 156 (1834).

Adult male. Easily distinguished from the male of *P. chinquis* by the following differences:—The longer crest-feathers are straight and glossed with purplish green, the dark bars on the feathers of the back of the neck are glossed with violet; the ground-colour of the rest of the upper parts is buff, thickly dotted and mottled with black; the ocelli on the wings and tail are entirely rich green in one light and purplish or blue in another *; only the middle pair of tail-feathers have ocelli on each side of the shaft; on all the outer pairs there is only one on the outer web; on the middle pair of tail-feathers and longer upper tail-coverts the ocelli are confluent in the middle line and not divided from one another by a pale band; the basal part of the tail-feathers and tail-coverts behind the ocelli is black reticulated with buff; the anterior part is rufous buff thickly spotted with black; the ear-coverts are blackish slightly glossed with green; rest of the underparts vermiculated with black and buff. Upper mandible blackish brown, under mandible horn-colour; naked skin on side of head red; legs and feet black. Total length 22 inches, wing 8·2, tail 10, tarsus 2·8.

The *immature male* resembles the female, but the black patches

* In one specimen from Malacca all the ocelli are dark greenish blue with deep violet reflections.

which represent the ocelli on the longer scapulars, outer secondaries, &c. are more or less green.

Adult female is easily distinguished from the female of *P. chinquis*, having the ground-colour of the back, wings, and rump buff, mottled with black; no ocelli on the inner webs of the outer tail-feathers; the longer upper tail-coverts with paired ocelli like the centre pair of tail-feathers; the basal part of the tail-feathers black mottled with buff, and the terminal part buff spotted and mottled with black. Total length 18·2 inches, wing 7·1, tail 6·5, tarsus 2·3.

Hab. South Tenasserim? Malay Peninsula; Sumatra.

a–f. ♂ ♀ ad. et imm. sk.	Prov. Wellesley (*Dr. Cantor*).	India Museum [P.].
g. ♂ ad. sk.	Malacca.	A. R. Wallace, Esq. [C.].
h, i. ♂ imm. et ♀ ad. sk.	Malacca, July.	Hume Coll.
k–r. ♂ ♀ ad. et imm. sk.	Malacca, May (*Maingay*).	Tweeddale Coll.
s–y. ♂ ♀ ad. sk.	Malacca.	Capt. Stackhouse Pinwill [P.].
z, a'. ♂ ♀ ad. sk.	Malacca.	W. Harvey, Esq. [P.].
b', c'. ♂ ♀ ad. sk.	Malacca (*Dr. Cantor*).	India Museum [P.].
d', e'. ♂ ♀ imm. sk.	Malacca.	Purchased. (Types of *P. hardwickii* & *P. lineatum*, Gray.)
f'. ♂ imm. sk.	Malacca (*Hardwicke*).	India Museum [P.].
g', h'. ♂ ad. et ♀ imm. sk.	Singapore.	Hume Coll.

4. Polyplectron schleiermacheri.

Polyplectron schleiermacheri, *Brügg. Ab. Ver. Brem.* v. p. 461, pl. ix. (1877) [S.E. Borneo]; *v. Pelz. Verh. z.-b. Wien*, xxx. p. 27 (1881) [♀, Teweh, C. Borneo]; *Everett, J. A. S. Str. Br.* p. 198 (1889).

Adult male. At once distinguished from *P. bicalcaratum*, to which it is most nearly allied, by the following characters:—The crest is curled forwards; the frill round the back of the neck is more developed and the violet margin much wider; the ocelli on the back and wings are bluish green; the sides of the neck and chest are black, finely mottled with buff, each feather with a golden-green subterminal, heart-shaped ocellus changing to bluish purple; the middle of the neck and chest white, which colour is irregularly continued down the middle of the breast and belly; the rest of the underparts are black speckled with buff; the ocelli on the middle pair of tail-feathers and upper tail-coverts touch but are not confluent. Bill horn-brown; naked skin on face reddish; legs and feet blue-grey. Total length 20 inches, wing 7·8, tail ca. 7·8, tarsus 2·6.

Adult female. Differs chiefly from the female of *P. bicalcaratum* in having no ocelli on the longer upper tail-coverts, so that the tail shows only a single series, and the underparts washed with black. Total length 14 inches, wing 6·8, tail 5·6, tarsus 2·3.

Hab. Mountains of Borneo. Recently obtained at Peitan, N. Borneo (*Everett*).

a. ♂ ad. sk.	South-east Borneo, Nov. (*G. Fischer*).	Darmstadt Mus. [E.]. (One of the types of the species.)

5. Polyplectron nehrkornæ.

Polyplectron emphanes, *Selat.* (*nec Sclat.* 1863) *Ibis*, 1878, p. 386; *Tweedd. P. Z. S.* 1878, p. 623 [P. Princesa].

Polyplectron napoleonis, *Tweedd.* (*nec Less.*) *P. Z. S.* 1878, p. 792; *Sharpe, Ibis*, 1888, p. 203; *Blasius, Ornis*, 1888, p. 317 [Palawan]; *Everett, List B. Born.* p. 198 (1889) [Palawan]; *Whitehead, Ibis*, 1890, p. 57 [Palawan].

Polyplectron nehrkornæ, *Blasius, Mitth. orn. Ver. Wien*, 1891, p. 1 [Palawan]; *id. J. f. O.* 1891, p. 10.

Adult male. Top of the head and elongate crest dark green, changing to purplish blue; back of the neck black, each feather with a submarginal steel-blue band and wide terminal fringe of golden green; mantle, scapulars, and median wing-coverts with the base black and the terminal half greenish blue edged with golden green and changing to dark blue and deep violet; the lesser wing-coverts black; the bastard-wing, quills, and their coverts brownish black; the lower back and rump black, thickly spotted and mottled with rufous buff; the upper tail-coverts and tail the same, but the spots are fewer, rounder, and paler than on the back; the longer tail-coverts and tail-feathers are terminated by a submarginal black band, edged on either side with buff and fringed externally with black; each of these feathers is ornamented with a pair of bluish-green ocelli, changing to deep violet and circumscribed by a black-and-grey ring; but the three or four outer pairs of tail-feathers have the eye on the inner web obsolete and only represented by a black spot; a very narrow superciliary * and a triangular patch covering the hinder part of the cheek and ear-coverts pure white; lores, thin covering of feathers on the sides of the face, chin, throat, and rest of underparts black; the feathers on the fore part of the neck are sometimes obscurely tipped with golden green, like those of the back. Bill dark brown, tip horny; orbital skin crimson. Legs and feet purple-brown. Total length 19 inches, wing 7·3, tail 8·7, tarsus 2·5.

An *immature male* resembles the female, but the tail and greater coverts are like those of the adult male, though the ocelli are much smaller and are absent on the inner web of all the tail-feathers except the three middle pairs; one or two of the feathers of the mantle have a metallic bluish-green patch in the middle; and traces are apparent of black plumage on the mantle, wing-coverts, throat, and underparts.

Adult female. Top of the head and nape brownish black, a well-developed crest: rest of upper parts pale rufous brown, finely mottled with black; the feathers of the mantle and wing-coverts with an ill-defined submarginal band of rufous buff; most of the feathers with pale shafts; quills and their coverts dark brown; upper tail-coverts and tail finely mottled with rufous buff and

* This stripe is absent in one specimen I have examined, and the supercilium is entirely naked.

black; longer coverts without ocelli: the three middle pairs of tail-feathers with a pair of dark green ocelli edged with black on each web, on the outer pairs the ocellus on the inner web is obsolete and represented by a black spot; lores, thin covering of feathers on sides of face, chin, and throat white; rest of underparts reddish brown faintly mottled with black, the feathers of the chest and breast with pale shafts. Orbital skin black. Total length 14·4 inches, wing 6·8, tail 5·5, tarsus 2·2.

Hab. Island of Palawan.

a–c. ♂ ♀ ad. et ♂ imm. sk.	Puerto Princesa, Palawan, Jan. (*A. H. Everett*).	Tweeddale Coll.

6. Polyplectron napoleonis.

Polyplectrum napoleonis, *Less. Traité d'Orn.* pp. 487, 650 (1831); *id. Comp. de Buff.* vii. p. 323 (1836); *Gray, Gen. B.* iii. p. 495 (1845); *id. List Gallinæ Brit. Mus.* p. 25 (1867).

Polyplectron emphanum, *Temm. Pl. Col.* v. pl. 18 [no. 540] (1831); *Jard. Nat. Lib., Orn.* iv. p. 159, pl. 5 (1834); *Gray, Hand-l. B.* p. 257 (1870); *Elliot, Mon. Phas.* i. pl. 9 (1872); *Salvad. Ucc. Born.* p. 304 (1874); *Oust. Bull. Soc. Philom.* (7) vi. p. 259 (1882) [Luzon].

Emphania napoleonis, *Bonap. C. R.* xlii. p. 878 (1856).

Polyplectron emphanes, *Sclat. List of Phas.* p. 12 (1863).

Adult male. Exactly similar to the male of *P. nehrkorni*, but the white superciliary stripes are wide and strongly marked and confluent on the nape. Total length 18·5 inches, wing 7·3, tail 7·8, tarsus 2·5.

Hab. Unknown: ? Luzon, Philippine Is.

a. ♂ ad. sk.	[Molucca Islands.]	Purchased of M. Verreaux.

39. CHALCURUS.

Type.

Chalcurus, *Bonap. Ann. Sci. Nat.* (4) i. p. 146 (1854).. C. chalcurus.

Tail composed of 16 feathers, elongate, wedge-shaped as in *Phasianus*: the middle pair nearly three times as long as the outer pair; all partially glossed with metallic purple, but no ocelli.

1st primary much shorter than the 2nd, which is shorter than the 10th; 6th a trifle the longest.

Sides of the face covered with small feathers.

Tarsus longer than middle toe and claw.

The basal half of the shafts of the contour-feathers much swollen.

Range. Sumatra.

1. Chalcurus chalcurus.

Polyplectrum chalcurum, *Less. Traité d'Orn.* p. 487 (1831).

Polyplectron chalcurum, *Temm. Pl. Col.* v. pl. 19 [no. 519] (1831) [Sumatra]; *Jard. Nat. Lib., Orn.* iv. p. 163, pl. vii. (1834); *Less. Comp. de Buff.* vii. p. 322 (1836); *Gray, List of B.*

pt. iii. *Gall.* p. 22 (1844); *id. Gen. B.* iii. p. 495 (1845); *Sclat. List of Phas.* p. 12 (1863); *Gray, List Gallinæ Brit. Mus.* p. 25 (1867); *id. Hand-l. B.* ii. p. 257 (1870); *Elliot, Mon. Phas.* i. pl. 10 (1872); *Nichols. Ibis*, 1883, p. 255 [Sumatra]; *Büttikof. N. Leyd. Mus.* ix. p. 77 (1887) [Padang, W. Sumatra].

Polyplectrum inocellatus, *Cuv. Paris Mus.*; *Less. Traité d'Orn.* p. 487 (1831).

Chalcurus inocellatus, *Bonap. C. R.* xlii. p. 878 (1856); *Salvad. Ann. Mus. Civ. Gen.* xiv. p. 248 [Mt. Singalan, W. Sumatra].

Adult male. General colour brown, all the feathers of the back, wing-coverts, rump, and upper tail-coverts barred and fringed with dull rufous; the bars on the longer upper tail-coverts are less regular and defined, but more directly transverse than those of the back, which more or less follow the curve of the margin of the feathers; quills dark brown, the secondaries slightly mottled on the outer web with pale rufous; sides of the face somewhat thickly covered with whitish-brown feathers; chin, throat, and neck-feathers with brown margins and whitish centres; underparts brown, the under tail-coverts with irregular pale rufous bars; the three middle pairs of tail-feathers black, irregularly barred with rufous, shading into purplish blue towards the extremity, and tipped with black spotted with pale rufous; the rest of the outer pairs similarly marked, but the greater part of their outer webs are purplish blue changing into violet. Total length 18 inches, wing 6·6, tail 9·2, tarsus 2·4.

Adult female. Similar to the male, but smaller and without spurs. Total length 15·7 inches, wing 6·2, tail 7·4, tarsus 2·2.

Hab. Same as that of the genus.

a, *b* ♂ ♀ ad. sk.	Sumatra.	Leyden Museum Coll.
c ♀ ad. sk.	Lolo, Sumatra (*C. Bock*).	Tweeddale Coll.

40. ARGUSIANUS.

	Type.
Argus, *Temm.* (*nec Boh., Moll.* 1761; *nec Scop., Lep.* 1777) *Pig. et Gall.* ii. p. 410 (1813)	A. argus.
Argusianus, *Rafinesque, Analyse*, p. 219 (1815)	A. argus.
Argusanus, *Bonap. C. R.* xlii. p. 878 (1856)	A. argus.
Argusa, *Kelham, Ibis*, 1881, p. 530	A. argus.
Argusinius, *Oustal. Bull. Soc. Philom.* (7) vi. p. 254 (1882)	A. argus.

Tail composed of 12 feathers; the middle pair enormously elongate and more than four times as long as the outer pair.

1st primary shortest; 10th longest; secondaries enormously developed, much longer than the primaries; the 8th and 9th nearly twice as long as the 1st.

Sides of the face, chin, throat, and fore part of the neck naked.

Tarsus much longer than the middle toe and claw.

Range. Laos Mts., Siam, South Tenasserim, Malay Peninsula, Sumatra, and Borneo.

Key to the Species.

A. Middle tail-feathers enormously elongate. (*Males.*)
  a. Primaries with a rufous-brown band finely dotted with white on the inner web.
    a'. Mantle black, mottled with buff and rufous; lower back and rump buff with black spots ..... *argus*, p. 363.
    b'. Mantle black, mottled with white and rufous; lower back and rump rufous-buff with black spots ..... *grayi*, p. 365.
  b. Primaries with a rufous-brown band finely dotted with white on the inner as well as the outer web ..... *bipunctatus*, p. 366.
B. Middle tail-feathers not enormously elongate. (*Females.*)
  c. Feathers surrounding the neck chestnut. Underparts rufous, vermiculated with black .. *argus*, p. 363.
  d. Feathers surrounding the neck rust-red. Underparts sandy brown, finely vermiculated with black ..... *grayi*, p. 365.

1. Argusianus argus.

Phasianus argus, *Linn. S. N.* i. p. 272 (1766); *Gm. S. N.* i. pt. ii. p. 742 (1788); *Lath. Ind. Orn.* ii. p. 629 (1790); *Bonnat. Tabl. Encycl. Méth.* i. p. 188, pl. 87. fig. 3 (1791); *Shaw, Mus. Lever.* p. 41, pl. (1792); *Raffl. Tr. Linn. Soc.* xiii. p. 320 (1822) [Sumatra]; *Gray in Griff. ed. Cuv.* iii. p. 24 (1829).

L'Argus ou Le Luen, *Buff. Hist. Nat. Ois.* ii. p. 361 (1771).

Argus Pheasant, *Lath. Gen. Syn.* ii. p. 710 (1783); *id. Gen. Hist.* viii. p. 205 (1823).

Argus giganteus, *Temm. Pig. et Gall.* ii. p. 410 (1813), iii. p. 678 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 243, pl. 14 (1819); *Schinz, Nat. Abbild. Vög.* p. 253, pl. 97 (1833); *Jard. Nat. Lib., Orn.* iv. p. 165, pl. viii. (1834); *Jard. & Selb. Ill. Orn.* n. s. pls. 14 & 15 (1837); *Gray, List of B.* pt. iii. *Gall.* p. 23 (1844); *id. Gen. B.* iii. p. 496 (1845); *Blyth, Cat. Mus. As. Soc.* p. 242 (1849); *Schinz, Nat. Vög.* p. 152, pl. 74 (1853); *Cass. U.S. Expl. Exped.* p. 292 (1858) [Singapore]; *Sclat. List of Phas.* p. 12 (1863) [part.]; *Fitz. Atl. Nat., Vög.* fig. 226 (1864); *Wallace, Malay Arch.* i. p. 32 (1869); *Elliot, Mon. Phas.* i. pl. 11 (1872); *Hume, Str. F.* ii. p. 481 (1874) [Tenasserim], iii. p. 324 (1875); *Hume & Marsh. Game B. Ind.* i. p. 99, pl. (1878); *Hume & Davison, Str. F.* vi. p. 427 (1878) [S. Tenasserim]; *Hume, Str. F.* viii. p. 68 (1879) [Malacca]; *Sclat. P. Z. S.* 1879, p. 115, pls. vii. & viii. fig. 1.

Argus pavonius, *Vieill. N. Dict. d'Hist. Nat.* ii. p. 507 (1816); *id. Gal. des Ois.* ii. p. 19, pl. 204 (1825); *Less. Traité d'Orn.* p. 488, pl. 84 (1831).

Malay Peacock, *Lath. Gen. Hist.* viii. p. 121, pl. 120 (1823).

Argus pavoninus, *J. E. Gray, Ill. Ind. Zool.* i. pl. 36 (1830–32).

Argusianus giganteus, *Gray, List Gallinæ Brit. Mus.* p. 25 (1867); *id. Hand-l. B.* ii. p. 257 (1870); *Blyth & Walden, Cat. Mamm. & B. Burma*, p. 148 (1875).

Argusianus argus, *Tweedd. Ibis*, 1877, p. 322 [Lampong, Sumatra]; *Salvad. Ann. Mus. Civ. Genov.* xiv. p. 294 (1879); *Oates, B. Burmah*,

ii. p. 313 (1883) [Siam?]; *Gould, B. Asia*, vii. pl. 52 (1883); *Hartert, J. f. O.* 1887, p. 378; *id. Cat. Mus. Senckenb.* p. 198 (1891) [Siam].

Argusa giganteus, *Kelham, Ibis*, 1881, p. 530 [Perak, Malacca].

Adult male. The top of the head and short occipital crest black; back of the neck thinly covered with hairy feathers finely barred with black and white; mantle, wing-coverts, and scapulars black, chequered and mottled with buff; lower back and shorter rump-feathers clear buff, with rounded black spots; longer rump-feathers paler buff, and elongate middle pair of tail-coverts whitish, thickly marked with kidney-shaped black spots and blotches; rest of upper and under tail-coverts black, with narrow wavy bars of white. Primaries greyish brown, shading into yellowish towards the margins of the outer webs and ornamented with closely approximated rows of black and rufous spots; on the basal part of the inner web, and separated from the shaft by a yellowish line regularly barred with black, is a band of rufous minutely dotted with white; shafts dull blue, edged with yellow near the extremity. Secondaries pale brownish white, the outer web with oblique bands and rows of black spots; next the shaft a series of large ocelli, gradually increasing in size towards the extremity; each of these ocelli is yellowish in the centre, shading into white on the one side and reddish brown on the other and surrounded by a black band; the inner web white towards the margin, ornamented with several rows of round black spots; the terminal part of each feather black, reticulated with pale rufous and spotted and marked with white. Fore part of neck chestnut barred with black; rest of underparts black, with wavy bars and markings of chestnut and buff. The long middle pair of tail-feathers tipped with dirty white; the outer web reddish brown shading into black towards the shaft, and the inner web grey: the whole thickly dotted with small white ocelli surrounded by black rings; the outer feathers similarly marked, but nearly uniform black, mottled with rufous towards the extremity. Bill and claws bluish white; facial skin dark blue; legs and feet bright red. Total length 72 inches; wing to the end of the primaries 19, to the end of the secondaries 34; tail 50, tarsus 4·4.

The *immature male* differs from the adult in having the lower back, rump, and upper tail-coverts like those of the female, only more coarsely marked; the primaries rufous, mottled and spotted with small irregular black marks; the secondaries like those of the female, but the ocelli of the adult are present in a rudimentary form; the breast finely vermiculated with reddish brown and black; and the outer tail-feathers mottled with rufous to the base.

Adult female. Feathers on the top of the head buff edged with black; nape as in the male; neck chestnut, slightly mottled with black and shading into reddish buff on the mantle, which is thickly mottled with black; lower back, rump, and upper tail-coverts bright buff, irregularly barred and vermiculated with black; primaries chestnut, mottled and spotted with irregular black marks; wing-coverts, scapulars, and secondaries black, thickly covered with buff hiero-

glyphics, the outer webs of the latter next the shafts mixed with rufous; chest and rest of underparts rufous, finely mottled with black; under tail-coverts black, finely vermiculated with pale rufous; tail-feathers black, thickly mottled with irregular rufous lines and marks. Legs and feet duller red than in the male. Total length 30 inches; wing to the end of the primaries 13, to end of the secondaries 15; tail 12·5, tarsus 4.

Hab. Laos Mountains, Siam, South Tenasserim, the Malay Peninsula, and Sumatra.

a, *b*. ♂ imm. sk.	Laos Mts.	M. Mouhot [C.].
c, *d*. ♂ ♀ ad. st.	S. Tenasserim.	E. W. Oates, Esq. [C.].
e–*v*. ♂ ♀ ad., imm., et pull. sk.	Bankasoon, Tenasserim, Feb., March, and Dec. (*W. Davison*).	Hume Coll.
w. ♂ nr. ad. sk.	Province Wellesley (*Dr. Cantor*).	India Museum [P.].
x–*b'*. ♂ ♀ ad. et imm. sk.	Mountains of Tringganu, Malacca (*Dr. Cantor*).	India Museum [P.].
c', *d'*. ♂ ♀ ad. sk.	Malacca.	India Museum [P.].
e'. ♀ ad. sk.	Malacca.	A. R. Wallace, Esq. [C.].
f', *g'*. ♂ ♀ ad. sk.	Malacca.	Capt. Stackhouse Pinwill [P.].
h'–*l'*. ♂ ♀ ad. et imm. sk.	Malacca (*Dr. Maingay*).	Tweeddale Coll.
m'. ♂ imm. sk.	Malacca.	Tweeddale Coll.
n', *o'*. ♂ ♀ ad. sk.	Malacca.	W. Harvey, Esq. [P.].
p'. ♂ ad. st.	[Malacca.]	Purchased.
q', *r'*. ♂ ♀ ad. sk.	Singapore.	Hume Coll.
s'. ♂ ad. sk.	Sumatra (*C. Boek*).	Tweeddale Coll.
t'. ♂ ad. sk.	W. coast of Sumatra.	Dr. von Faber [C.].
u'. ♂ ad. sk.	Lampong, S.E. Sumatra (*E. C. Buxton*).	Tweeddale Coll.

v'. Skeleton.

2. Argusianus grayi.

Argus giganteus, *Müll.* (*nec Temm.*) *Verhandl. Land- en Volkenk.* p. 439 (1839–44); *Sclater, P. Z. S.* 1863, pp. 124 [part.] & 222; *id. List of Phas.* p. 12 (1863) [part., Borneo].

Argus grayi, *Elliot, Ibis*, 1865, p. 423 [Borneo]; *id. Mon. Phas.* i. p. xviii, pl. 12 [text] (1872) [Borneo]; *Sharpe, Ibis*, 1877, p. 23 [Bintulu]; *id. Ibis*, 1879, p. 267 [Lawas R.]; *Elliot, Auk*, viii. p. 14 (1891) [N.E. Borneo].

Argusianus grayi, *Gray, List Gallinæ Brit. Mus.* p. 26 (1867); *id. Hand-l. B.* ii. p. 257 (1870); *Walden, Ibis*, 1872, p. 381; *Salvad. Ucc. Born.* p. 305 (1874); *Guillem. P. Z. S.* 1885, p. 416 [Silam, Sandakan]; *Everett, List B. Born.* p. 197 (1889).

Adult male. Differs chiefly from the adult male of *A. argus* in having the mantle, wing-coverts, and scapulars black, mottled with white and rufous, the lower back and rump rufous buff; the neck and upper chest brighter rufous, with yellowish shaft-stripes; the sides and flanks more or less mottled with white. Total length 60 inches; wing to end of primaries 17, and to end of secondaries 33; tail 42, tarsus 4.

The *young male* differs from the adult in a similar manner to the young of *A. argus*.

The *adult female* differs from the female of *A. argus* in having the feathers of the neck rust-red instead of chestnut, the buff markings on the terminal parts of the feathers of the rump and upper tail-coverts not so coarse; the chest and underparts pale sandy brown, only slightly mixed with rufous and thickly vermiculated with black. Total length 29 inches; wing to the end of the primaries 12·6, and to the end of the secondaries 14; tail 11·8, tarsus 3·6.

Hab. Borneo.

a. ♂ ad. sk.	N. Borneo.	Gould Coll.
b, *c*. ♂ ad. sk.	N. Borneo.	Tweeddale Coll.
d, *e*. ♂ ad. et imm. sk.	Sarawak.	Rajah Brooke [P.]. (Types of the species.)
f. ♀ ad. sk.	Sarawak.	A. R. Wallace, Esq. [C.].
g–*k*. ♂ ♀ ad. et ♂ imm. sk.	Baram, Sarawak.	C. Hose, Esq. [C.].
l, *m*. ♂ ♀ ad. sk.	Mt. Dulit, Sarawak, 2000 to 3000 feet, November.	C. Hose, Esq. [C.].

3. Argusianus bipunctatus.

Argus bipunctatus, *Wood*, *Ann. Mag. N. H.* (4) viii. p. 67 (1871); *Elliot*, *Mon. Phas.* i. pl. 13 (1872).

This species is still known only from a portion of a primary wing-feather from a male bird, which is now preserved in this Museum; but it is so perfectly distinct both in its markings and in the shape of the shaft of the quill from either of the above species that one can have no hesitation in recognizing it as belonging to a distinct species, in spite of the somewhat fragmentary evidence.

The general colour of this feather is similar to that of a primary quill of *A. argus* and *A. grayi*, but there is a reddish-brown band minutely dotted with white on the outer as well as the inner web. These bands extend over a large proportion of both the webs; the shaft is remarkably narrow and attenuated.

Hab. Unknown.

a. Portion of primary quill.	Locality unknown.	E. Bartlett, Esq. [P.]. (Type of the species.)

41. RHEINARDTIUS.

	Type.
Rheinardius, *Oustal. Bull. Soc. Philom.* (7) vi. p. 254 (1882)	R. ocellatus.
Rheinhardius, *Sclat. & Saund. Ibis*, 1883, p. 107	R. ocellatus.
Rheinartius, *Oustal. N. Arch. Mus.* (2) viii. p. 256 (1885)	R. ocellatus.

Tail composed of 12 feathers, the middle pair being enormously

elongate, the second pair considerably shorter, and the outermost pair about one fifth the length of the middle pair.

1st primary much shorter than the 2nd; 4th is about equal in length to the 10th; and the 5th or 6th slightly the longest.

Secondaries not longer than the primaries.

Sides of the head naked, crown feathered, and an erect occipital hairy crest covering the nape.

Tarsus rather shorter than the middle toe and claw.

Range. Mountains in the interior of Tonkin.

1. Rheinardtius ocellatus.

Argus ocellatus, *Verr.*, *Bonap. C. R.* xlii. p. 878 (1856); *Wood*, *Ann. Mag. N. H.* (4) x. p. 67 (1872); *Elliot*, *Ann. Mag. N. H.* (4) viii. p. 119 (1871); *id. Mon. Phas.* i. pl. 13 (1872).
Rheinartius ocellatus, *Oustal. Ann. Sci. Nat.* (6) xiii. Art. 12 (1882); *id. N. Arch. Mus.* (2) viii. p. 256, pl. ii. (1885).
Rheinardius ocellatus, *Oustal. Bull. Soc. Philom.* (7) vi. p. 254 (1882).
Argus rheinardti, *Maing. Bull. Soc. Z. Fr.* vii. p. xxv (1882) [Tonkin].

Adult male. General colour of the upper parts dark brown, mixed here and there with red, each feather thickly covered with small white spots and markings; on the outer webs of the secondaries these markings take more the form of irregular oblique white lines; top of the head covered with short velvety feathers, brownish black in the middle and white on each side; a high occipital crest of erect hairy feathers, white in the middle and reddish brown on the sides; ear-coverts brownish black like the top of the head; chin and throat whitish, gradually shading into rufous round the sides of the neck; underparts similar to the upper but more mixed with dark chestnut, and each feather with a more or less marked shaft-stripe of deep chestnut; the upper tail-coverts and enormously elongate pair of centre tail-feathers have the ground-colour grey, thickly covered with larger spots and markings of chestnut, the spots on either side of the shaft with black central rings and smaller rounded dots of white; the outer tail-feathers have the ground-colour reddish brown, thickly covered with round white spots surrounded by rings of black. Total length about 7 feet, wing 13·5 inches, tail 5 feet, tarsus 3·5 inches, middle toe and claw 3·7.

Adult female. General colour above umber-brown, each feather transversely mottled with black and buff, these markings are stronger on the secondaries and tail-feathers; underparts brown, finely vermiculated with black; crest much shorter and less full than that of the male, the erect plumes in front being blackish white, and the more recumbent ones on the nape dirty whitish buff. Total length about 31 inches, wing 11·5, tail 14·5, tarsus 3·4.

Hab. Same as that of the genus.

a, *b*. ♂ ♀ ad. st. Mts. in interior of Tonkin. Purchased.

42. PAVO.

	Type.
Pavo, *Linn. S. N.* i. p. 267 (1766)	P. cristatus.
Pavianus, *Rafinesque, Analyse*, p. 219 (1815).....	P. cristatus.
Spiciferus, *Bonap. C. R.* xlii. p. 878 (1856)	P. muticus.

Tail long and wedge-shaped, composed of 20 feathers; upper tail-coverts far exceed the tail in length.

1st primary much shorter than the 10th; 5th somewhat the longest.

Tarsus much longer than the middle toe and claw, armed in the male with a short stout spur.

An elevated crest of feathers.

Range. India and the Indo-Chinese countries, Malay Peninsula, ? Sumatra, and Java.

Key to the Species.

A. Crest composed of erect naked shafts with plume-like extremities.
  a. Upper tail-coverts enormously elongate..... *cristatus* ♂, p. 368.
  b. Upper tail-coverts not enormously elongate .. *cristatus* ♀, p. 368.
B. Crest composed of normally developed feathers equally webbed on each side of the shaft.
  c. Upper tail-coverts enormously elongate..... *muticus* ♂, p. 371.
  d. Upper tail-coverts not enormously elongate .. *muticus* ♀, p. 371.

1. Pavo cristatus.

Pavo cristatus, *Linn. S. N.* i. p. 267 (1766); *Gm. S. N.* i. pt. ii. p. 729 (1788); *Lath. Ind. Orn.* ii. p. 616 (1790); *Bonnat. Tabl. Encycl. Méth.* i. p. 176 (1791); *Hayes, Osterl. Menag.* p. 99, pl. 99 (1794); *Pall. Zoogr. Rosso-Asiat.* ii. p. 93 (1811); *Temm. Pig. et Gall.* ii. p. 26 (1813), iii. p. 650 (1815); *Cuv. Règ. Anim.* i. p. 438 (1817); *Vieill. N. Dict. d'Hist. Nat.* xxiv. p. 473 (1818); *Cuv. Règ. Anim.* i. p. 473 (1829); *Griff. ed. Cuv.* iii. p. 12 (1829); *Guérin-Méneville, Icon. Règ. Anim., Ois.* p. 25, pl. 40. fig. 1 (1829–38); *Vig. in Raffl. Mem.* p. 676 (1830) [Sumatra!]; *Less. Traité d'Orn.* p. 486, pl. 82. fig. 1 (1831); *Sykes, P. Z. S.* 1832, p. 151 [Deccan]; *Gray, List of B.* pt. iii. *Gall.* p. 22 (1844); *Blyth, Cat. Mus. As. Soc.* p. 239 (1849); *Layard, Ann. Mag. N. H.* (2) xiv. p. 62 (1854) [Ceylon]; *Burgess, P. Z. S.* 1855, p. 29; *Adams, P. Z. S.* 1858, p. 498 [Punjab]; *Irby, Ibis*, 1861, p. 234 [Oudh and Kumaon]; *Jerd. B. Ind.* iii. p. 506 (1863); *Sclat. List of Phas.* p. 11 (1863); *Fitz. Atl. Nat., Vög.* fig. 224 (1864); *Blyth, Ibis*, 1867, p. 151; *Gray, List Gallinæ Brit. Mus.* p. 22 (1867); *Beavan, Ibis*, 1868, p. 379; *Melliss, Ibis*, 1870, p. 103 [St. Helena]; *Gray, Hand-l. B.* ii. p. 256 (1870); *Elwes, Ibis*, 1870, p. 528 [Cardamum Hills]; *Holdsw. P. Z. S.* 1872, p. 467 [Ceylon]; *Elliot, Mon. Phas.* i. pl. 3 (1872); *Hume, N. & E. Ind. B.* p. 516 (1873); *Adam, Str. Fr.* i. p. 392 (1873) [Sambhur]; *Lloyd, Ibis*, 1873, p. 415 [Kattiawar]; *Hume, Str. F.* ii. p. 276 (1874) [Ross I., Andamans]; *Ball, Str. F.* ii. p. 426 (1874) [Chota Nagpur]; *Legge, Ibis*, 1875, p. 400 [S. Ceylon]; *Butl. Str. F.* iv. p. 5 (1876) [N. Guzerat]; *Fairb. Str. F.* iv. p. 262 (1876) [Khandala], v. p. 409 (1877) [Palani Hills]; *Marsh. B. Nest. Ind.* p. 59 (1877); *Hume, Str. F.* vii. p. 67 [Rajpootana], p. 177 (1878) [Sindh]; *Davids. & Wend. Str. F.* vii. p. 86 (1878) [Deccan]; *Ball, Str. F.* vii. p. 225

(1878) [Ganges to Godaveri]; *Hume & Marsh. Game B. Ind.* i. p. 81, pl. (1878); *Scully, Str. F.* viii. p. 342 (1879) [Nepal]; *Doig, Str. F.* viii. p. 371 (1879) [Eastern Narra]; *Wilson, Str. F.* viii. p. 492 (1879) [Dhoon]; *Butler, Str. F.* viii. p. 493 (1879) [Mozuffernugger Dist.]; *id. Cat. B. Sind*, p. 53 (1879) [Sind, Cutch, Kattiawar, Gujarat, Mt. Aboo]; *Legge, B. Ceyl.* iii. p. 731 (1880); *Vidal, Str. F.* ix. p. 75 (1880) [S. Koukan]; *McInroy, Str. F.* ix. p. 202 (1880) [Mysore]; *Butler, Str. F.* ix. p. 421 (1880) [Deccan and S. Mahratta Country]; *Reid, Str. F.* x. p. 61 (1881) [Lucknow Civil Div.]; *Davids. Str. F.* x. p. 316 (1882) [W. Khandeish]; *Davison, Str. F.* x. p. 409 (1883) [Nilghiris, Wynaad, Mysore]; *Swinh. & Barn. Ibis*, 1885, p. 131 [Central India]; *Taylor, Str. F.* x. p. 464 (1887) [Munzeerabad, Mysore], pp. 530, 531 (1887) [Orissa]; *Oates, ed. Hume's Nests & Eggs*, iii. p. 405 (1890).

Le Paon, *D'Aubent. Pl. Enl.* pls. 433, 434; *Buff. Hist. Nat. Ois.* ii. p. 288, pl. x. (1771).

Crested Peacock, *Lath. Gen. Syn.* ii. pt. ii. p. 668 (1783); *id. Gen. Hist.* viii. p. 108 (1823).

? Pavo assamensis, *McClell. Ind. Rev.* 1838, p. 513.

Adult male. Top of the head covered with short curly metallic green and blue feathers, occipital crest composed of fan-shaped bluish-green feathers at the end of elevated shafts; neck greenish blue, shading into rich purplish blue on the upper parts of the mantle and chest; feathers of the mantle with the terminal half copper-coloured, surrounded with golden green and margined with black, and with narrow green shaft-stripes; feathers of the lower back, rump, and upper tail-coverts, especially the latter, enormously developed, with the greater part of the web free; the majority of these feathers, except the very longest and some of the outer tail-coverts, are ornamented with brilliant subterminal ocelli, green with purple pupils in a field of golden copper, and circumscribed with rings of gold, copper, and other metallic hues; the general ground-colour of the shorter feathers in the middle of the train is purplish copper, and the rest golden green, the whole varying in colour according to the light, a number of the lateral feathers are blade-shaped and feathered on the outer web of the shaft only; the longest upper tail-coverts terminate in green fan-shaped plumes devoid of ocelli; the lesser and median wing-coverts, scapulars, and outer secondaries pale buff, barred and mottled with black, more or less glossed with green; the primaries and their coverts and the bastard-wing pale chestnut; the inner primaries more or less mottled with black; the rest of the secondaries and their coverts black; a few of the outer median coverts black, glossed with purplish green; feathers in front of the eye, the superciliary stripe, chin, throat, fore part of neck, breast, and flanks dark glossy green; belly and largely-developed downy under tail-coverts blackish brown; thighs whitish buff; tail blackish brown, the outer web with wavy buff mottlings. Naked skin round the eye and on the cheek livid white; bill and legs dark horn-grey. Total length to end of tail 35 inches, to end of upper tail-coverts 78, wing 17·5, tail 19·5, tarsus 5·5.

Adult female. Top of the head, lores, superciliary stripe, ear-

coverts, and nape dark chestnut, irregularly bordered with white; crest shaped like that of the male, but the terminal plume mostly chestnut edged with golden green; upper neck chestnut, most of the feathers tipped with golden green; lower part of neck and upper mantle golden green, some of the lower feathers fringed with buff; rest of the upper parts brown, more or less indistinctly mottled with buff; primaries and secondaries dark brown, the former indistinctly mottled with rufous and the latter with buff towards the edge of the outer web; the outer median and secondary wing-coverts more coarsely mottled with buff and black; chin, throat, and a part of the neck white; chest brownish black, edged with green and shading into buff; breast, sides, and flanks buff, more or less mixed with rufous, and shading into brown on the belly and under tail-coverts; tail dark brown, slightly mottled with whitish buff. Total length 32 inches, wing 16, tail 13, tarsus 4·8.

Young males closely resemble the female, but the primaries are mostly pale chestnut, more or less mottled with black, and the secondaries are more coarsely mottled with pale buff.

Immature males resemble the adult, but the mantle and chest are greenish blue and not nearly so brilliant, and the train is absent or rudimentary.

Hab. India and Ceylon.

a–c. ♂ ad. sk.	India.	India Museum [P.].
d. ♀ ad. st.	India.	Dr. J. F. Royle [P.].
e. ♂ juv. sk.	Raipur, Cent. Provinces.	Hume Coll.
f–k. ♂ ad. sk.	Delhi.	Hume Coll.
l. ♂ ad. sk.	Etawah.	Hume Coll.
m–u. ♂ ♀ ad. et ♂ imm. sk.	Sikhim, Feb. (*L. Mandelli*).	Hume Coll.
v. ♂ ad. sk.	Bhotan Doars, March (*L. Mandelli*).	Hume Coll.
w. ♂ ad. sk.	Assam.	India Museum [P.].
x. ♀ ad. sk.	[Assam.]	India Museum [P.].
y. ♂ ad. st.	England.	Dr. Dowler [P.].
z–a′. ♂ ♀ ad. st.	England.	J. E. Harris, Esq. [P.].
b′. Pull. st.	No locality.	
c′–e′. Skeletons.		
f′. ♀ skeleton.		Salvin-Godman Coll.
g′–k′. Sterna.		

A well-marked variety has been described under the name of *Pavo nigripennis*; the following is the synonymy:—

Black-shouldered Peacock, *Lath. Gen. Hist.* viii. p. 114 (1823).

Pavo nigripennis *, *Sclat. P. Z. S.* 1860, p. 221; *id. List of Phas.* p. 11 (1863); *Gray, List Gallinæ Brit. Mus.* p. 22 (1867); *id. Hand-l. B.* ii. p. 256 (1870); *Elliot, Mon. Phas.* i. pl. 4 (1872); *Gurney, Zool.* 1883, p. 33.

* Birds belonging to this variety closely resemble the hybrids between *P. cristatus* and *P. muticus*, but as it has been clearly shown by Darwin that the black-winged variety arises independently in flocks of *P. cristatus* which have been pure bred for many years, there can be no doubt that it is merely a sport of Nature.

Differs from *P. cristatus* in having the whole of the lesser and median wing-coverts, scapulars, and secondaries brownish black, more or less glossed with purple and edged with green; only the longer scapulars and secondaries with traces of buff mottling; the primaries and their coverts with an irregular black line running along the shaft to the tip and edging the inner web, and the thighs black instead of buff.

a. ♂ ad. st.	[Malay Archipelago.]	Purchased.
b. ♂ ad. st.	Yorkshire (in confinement).	J. Michell, Esq. [P.].

Hybrid between Pavo cristatus ♂ *and* P. muticus ♀.

a, *b*. ♂ imm. st.	Zool. Soc. Coll.

Hybrid between Pavo muticus ♂ *and* P. cristatus ♀.

a, *b*. ♂ imm. st.	Zool. Soc. Coll.

Hybrid between P. cristatus *and* Numida meleagris, *Hocker, J. f. O.* 1870, p. 152.

2. Pavo muticus.

Le Paon du Japon, *Briss. Orn.* i. p. 289 (1760).

Pavo muticus, *Linn. S. N.* i. p. 268 (1766); *Gm. S. N.* i. pt. ii. p. 731 (1788); *Lath. Ind. Orn.* ii. p. 617 (1790); *Temm. Pig. et Gall.* ii. p. 56 (1813), iii. p. 652 (1815); *Griff. ed. Cuvier*, iii. p. 12, pl. (1829); *Vigors in Raffl. Mem.* p. 676 (1830) [Sumatra, Java]; *Jard. Nat. Lib., Orn.* iv. p. 152, pl. 1 (1834); *McClell. Calcutta Journ. N. H.* ii. p. 144 (1842) [Chittagong]; *Blyth, Cat. Mus. As. Soc.* p. 239 (1849); *Crawf. Tr. Ethn. Soc.* n. s. ii. p. 451 (1863) [Malay Pen., Sumatra, Java]; *Jerd. B. Ind.* iii. p. 508 (1863); *Sclat. List of Phas.* p. 11 (1863); *Blyth, Ibis*, 1867, p. 152; *Gray, List Gallinæ Brit. Mus.* p. 22 (1867); *id. Hand-l. B.* ii. p. 256 (1870); *Swinh. Ibis*, 1870, p. 359 [Cochin China]; *id. P. Z. S.* 1871, p. 398 [S.W. China]; *Elliot, Mon. Phas.* i. pl. 5 (1872); *Hume, Str. F.* ii. p. 481 (1874) [Tenasserim], iii. p. 165 (1875) [Upper Pegu]; *Blyth & Walden, Cat. Mamm. & B. Burma*, p. 147 (1875) [Chittagong, Arrakan, Tenasserim, Siam]; *David & Oustal. Ois. Chine*, p. 402 (1877); *Hume & Davison, Str. F.* vi. pp. 425, 520 (1878) [Tenasserim], vii. p. 455 (1878); *Anders. B. W. Yunnan*, p. 668 (1878) [Upper Burmah]; *Hume & Marsh. Game B. Ind.* i. p. 94, pl. (1878); *Hume, Str. F.* viii. p. 68 (1879) [Malay Pen.]; *Bingham, Str. F.* ix. p. 195 (1880) [Thoungyeen and Attaran Valleys]; *Fasson, Str. F.* ix. p. 202 (1880) [Chittagong]; *Kelham, Ibis*, 1881, p. 529 [Kedah and Perak]; *Oates, Str. F.* x. p. 235 (1882) [Pegu]; *id. B. Burmah*, ii. p. 312 (1883).

Le Spicifère, *Buff. Hist. Nat. Ois.* ii. p. 366 (1771).

Japan Peacock, *Lath. Gen. Syn.* ii. pt. ii. p. 672 (1783); *id. Gen. Hist.* viii. p. 116 (1823).

Pavo japonensis, *Bonnat. Tabl. Encycl. Méth.* i. p. 179 (1791).

Pavo spiciferus, *Shaw & Nodd. Nat. Misc.* xvi. pl. 641; *Vieill. Gal. des Ois.* ii. p. 14, pl. 202 (1825); *Less. Traité d'Orn.* p. 486 (1831); *Gray, List of B.* pt. iii., *Gall.* p. 22 (1844).

Pavo javanicus, *Horsf. Tr. Linn. Soc.* xiii. p. 185 (1822) [Java].

Pavo cristatus, *Raffl.* (*nec Linn.*) *Tr. Linn. Soc.* xiii. p. 319 (1822) [Malay Pen., Java, ? Sumatra]; *Schinz, Nat. Abbild. Vög.* p. 239, pl. 92 (1833).
Javan Peacock, *Lath. Gen. Hist.* viii. p. 116 (1823).
Javanese Peacock's head, *Gray, Ill. Ind. Zool.* i. pl. 53. fig. 2 (1830–32).
Pavo aldrovandi, *Wilson, Ill. Zool.* pls. xiv., xv. (1831).
Pavo spicifer, *Schinz, Nat. Vög.* p. 150, pl. 73 (1853).

Adult male. Differs chiefly from *P. cristatus* in having the feathers of the crest more elongate, normally developed, and equally webbed on each side of the shaft; the whole of the feathers of the neck, upper mantle, and chest dull gold, narrowly margined with black and with a large central patch of deep blue shading into golden green on the sides; the wing-coverts and scapulars black, glossed with purplish blue and margined with green; the feathers of the lower back, rump, and shorter upper tail-coverts more glossed with purple, the longer upper tail-coverts with brilliant gold and green; the thighs black glossed with green. Naked skin round the eye bluish green, on the cheek orange; bill horn-grey; legs and feet dark brownish grey. Total length to end of tail 51 inches, to the end of the upper tail-coverts 82·5, wing 19·1, tail 22·5, tarsus 6·6.

An *immature male* resembles the female, but the lower back is mostly bronze-green shading into bronze on the rump, the upper tail-coverts are golden green tipped with bronze, and do not extend to within six or seven inches of the end of the tail.

In *quite young specimens* the green of the neck, mantle, and breast is well developed, though slightly mottled here and there with buff; the crest also is about three inches in length; and the tail is distinctly barred with buff.

Adult female. Differs from the male in having the lower mantle, back, rump, scapulars, and outer secondaries mostly blackish brown, barred and indistinctly mottled with buff and only very slightly glossed with green; the upper tail-coverts extending nearly to the end of the tail and of a golden-green hue irregularly barred with buff. Total length 44 inches, wing 16·7, tail 16, tarsus 5·4.

Hab. Indo-Chinese countries, ranging north to Chittagong, east through Siam to Cochin China, and south through the Malay Peninsula; also Sumatra? and Java.

a. Imm. sk.	Burmah (*Houghton*).	Tweeddale Coll.
b–d. ♂ nr. ad. et ♂ imm. sk.	Salween District, Jan. (*W. Davison*).	Hume Coll.
e, f. ♂ imm. et ♀ ad. sk.	Pahpoon, Jan. (*W. Davison*).	Hume Coll.
g, h. ♂ ♀ ad. sk.	Wimpong, nr. Thatone, Jan. Dec. (*W. Davison*).	Hume Coll.
i. ♀ ad. sk.	Siam.	Purchased.
k–m. ♂ imm. et juv. sk.	Cochin China.	M. E. Pierre [P.].
n, o. ♂ imm. sk. et ♂ head only.	Malacca (*Cantor*).	India Museum [P.].

p. ♂ imm. sk.	Malacca.	Capt. Stackhouse Pinwill [P.].
q. ♂ juv. sk.	[Salawatti], July.	Gould Coll.
r, s. ♂ ♀ ad. st.	Malayan Archipelago.	Purchased.
t. Pull. st.		Zool. Soc. Coll.
u, v. Skeletons.	Java.	Purchased.
w. ♂ sternum.	Java.	Zool. Soc. Coll.

43. PHASIDUS.

Type.

Phasidus, *Cassin, P. Ac. Philad.* 1856, p. 322 ..... P. niger.

Head and neck naked, with the exception of a band of feathers from the base of the bill to the occiput, and a few small scattered plumes on the neck.

Tail probably composed of 14 feathers, moderately long and rounded. Upper tail-coverts about $\frac{2}{3}$ the length of tail.

1st primary considerably shorter than the 2nd, which is about equal to the 10th, the 4th slightly the longest.

Tarsus somewhat longer than the middle toe and claw, provided with a short blunt spur in the male.

Range. W. Africa, from Cape Lopez to Loango.

1. Phasidus niger.

Phasidus niger, *Cass. P. Ac. Philad.* 1856, p. 322 [Cape Lopez]; *Hartl. Orn. W.-Afr.* p. 268 (1857); *Cass. Journ. Ac. Philad.* (2) iv. p. 7, pl. 3 (1858); *Du Chaill. Expl. Equat. Afr.* p. 158 (1861); *id. Ibis*, 1861, p. 303; *Sclat. P. Z. S.* 1863, p. 126; *Gray, List Gallinæ Brit. Mus.* p. 45 (1867) [Ogowe R.]; *id. Hand-l. B.* ii. p. 263 (1870); *Elliot, Mon. Phas.* ii. pl. 36 (1872); *Reich. J. f. O.* 1877, p. 13 [Loango Coast]; *Rochebr. Act. Soc. Linn. Bord.* xxxviii. p. 356, pl. xxii. (1884).

Adult male. A band of black feathers from the base of the bill to the occiput, rest of the head naked; chin and throat almost naked, with a few small scattered black plumes; nape and back of the neck thinly covered with feathers; rest of the plumage blackish brown, obscurely vermiculated with brown. Naked skin on the head and neck Naples-yellow, shading into orange-yellow on the throat and lower parts of the neck; bill reddish brown; legs pinkish horn; the tarsi are armed with a pair of short stout spurs. Total length 16·6 inches, wing 8·8, tail 5·5 *, tarsus 2·7.

Adult female. Similar in plumage to the male, but without spurs.

Hab. Same as that of the genus.

a, b. ♂ ad. sk.	Ogowe R., West Africa.	M. Du Chaillu [C.].

* Middle pairs of feathers wanting in both specimens. Cassin gives the length as 6·0.

44. AGELASTES.

	Type.
Agelastes (*Temm.*), *Bonap. P. Z. S.* 1849, p. 145 ..	A. meleagrides.
Agelastus, *Hartl. J. f. O.* 1855, p. 356	A. meleagrides.

Skin of the head and greater part of the neck naked or with only a few minute scattered plumes.

Tail composed of 14 feathers, rather long, rounded, the outer feathers not very much shorter than the middle pair. Upper tail-coverts $\frac{2}{3}$ of the length of the middle pair of tail-feathers.

1st primary much shorter than the 2nd, which equals the 10th; 5th to 7th longest.

Tarsus considerably longer than the middle toe and claw, and armed in the male with a short stout spur.

Range. West Africa from Liberia to Gaboon.

1. Agelastes meleagrides.

Agelastes meleagrides (*Temm.*), *Bonap. P. Z. S.* 1849, p. 145; *Schl. Handl. Dierk.* 1857, *Voy.* fig. 57; *Sclat. P. Z. S.* 1863, p. 126 [Gaboon]; *Gray, List Gallinæ Brit. Mus.* p. 45 (1867); *id. Hand-l. B.* ii. p. 263 (1870); *Schl. Dierentuin*, 1872, p. 220, fig.; *Elliot, Mon. Phas.* ii. pl. 37 (1872); *Büttikofer, N. Leyd. Mus.* vii. p. 230 (1885), & x. p. 98 (1888) [Liberia].

Agelastus meleagrides, *Hartl. J. f. O.* 1855, p. 356 [Dabocrom]; *Schl. Handl. tot der Dierk.* i. p. 382 (1857); *Hartl. Orn. W.-Afr.* p. 200 (1857).

Adult male. Feathers on the lower parts of the neck, upper mantle, and chest white; rest of the plumage black, finely vermiculated with white, except the primaries, which have the outer web edged with whitish grey. A pair of short stout spurs. Naked skin of the head red, darker on the occiput and hind neck; skin of the lower neck milky white. Bill greenish brown, feet olive-grey. Total length 19 inches, wing 8·7, tail 6, tarsus 2·9.

Adult female. Differs only from the male in having no spurs. Total length 18 inches, wing 8·4, tail 6, tarsus 2·9.

An *immature* specimen has the head and neck more or less covered with downy blackish-brown feathers; the mantle and chest blackish brown, the rest of the plumage the same, tipped and barred with rusty brown, and the middle of the belly white.

Hab. Same as that of the genus.

a, *b*. ♀ ad. et imm. sk.	Denkera, Ashantee (*Ussher*).	Sharpe & Shelley Colls.
c. ♂ ad. sk.	Elmina, Fantee.	Purchased.

45. NUMIDA.

	Type.
Numida, *Linn. S. N.* i. p. 273 (1766)	N. meleagris.
Numidia, *Flem. Philos. Zool.* ii. p. 230 (1822)	N. meleagris.
Querelea, *Reichenb. Nat. Syst. Vög.* p. xxvii (1852) ..	N. mitrata.

Head and neck naked; top of the head with a bony helmet, more

or less elevated; a pair of wattles, one on each side behind the angles of the gape.

1st primary shorter than the 2nd, which is equal to or rather longer than the 10th: 5th slightly the longest.

Tarsus not armed with spurs, rather longer than the middle toe and claw.

Tail composed of 16 feathers, fairly long and somewhat rounded, the middle pair of feathers being about $\frac{1}{2}$ an inch longer than the outer pair. Tail-coverts reach to within half an inch of the extremity of the tail.

General plumage black, spotted with white, the outer webs of the first four or five secondaries are not margined with pure white.

Range. Africa and Madagascar.

Key to the Species.

(Sexes similar in plumage.)

A. A wide collar of vinous grey covering the upper part of the mantle and chest ..... *meleagris*, p. 375.

B. No vinous grey collar.

a. No horny bristles at the base of the bill.

a'. Bony helmet long, elevated, and compressed (height 1*–1·5 inch, length ·9†), tarsus 3·1, middle toe (with claw) 2·65 ..... *coronata*, p. 376.

b'. Bony helmet less elevated and stouter (height ·7 inch, length 1·2), tarsus 3·5, middle toe (with claw) 3·15 ..... *marungensis*, p. 377.

c'. Bony helmet elevated, cylindrical, and slightly curved backwards (height 2·1 inches, length ·55), tarsus 2·7, middle toe (with claw) 2·4..... *cornuta*, p. 378.

d'. Bony helmet short, stout, and conical (height ·8 inch, length ·9), tarsus 3·2, middle toe (with claw) 2·6 ..... *mitrata*, p. 378.

b. A bunch of horny bristles at the base of the culmen ..... *ptilorhyncha*, p. 379.

1. Numida meleagris ‡.

Numida meleagris, *Linn. S. N.* i. p. 273 (1766); *Gmel. S. N.* i. pt. ii. p. 744 (1788); *Lath. Ind. Orn.* ii. p. 621 (1790); *Bonnat. Tabl. Encyel. Méth.* i. p. 191, pl. 85. fig. 1 (1791); *Temm. Pig. et Gall.* ii. p. 431 (1813), iii. p. 680 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 258 (1819); *Less. Traité d'Orn.* p. 497, pl. 81. fig. 2 (1831); *Jard. Nat. Lib., Orn.* iii. p. 229, pl. 29 (1836); *Gray, List B.* pt. iii. *Gall.* p. 29 (1844); *id. Gen. B.* iii. p. 501, pl. 128. fig. 2 (1845);

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* The height is measured from the middle of the base to the apex.

† The length is measured at the base of the helmet.

‡ Cabanis, J. f. O. 1876, p. 210, describes a supposed new species from Zanzibar under the name of *Numida orientalis*, but it appears to be only a domestic variety of *Numida meleagris* with abnormally developed wattles (1 inch wide and $\frac{1}{2}$ an inch long) at the angle of the gape.

Denny, P. Z. S. 1847, p. 39 [Jamaica, Cuba, introduced]; *Gosse, B. Jam.* p. 325 (1847) [Jamaica]; *Allen & Thomps. Exp. Nig.* ii. p. 60 (1848); *Hartl. Orn. W.-Afr.* p. 199 (1857) [Gambia, Ashantee, Gaboon, Cape Verd, Annobon, and St. Thomas Is.]; *Sallé, P. Z. S.* 1857, p. 236 [St. Domingo]; *Sclat. P. Z. S.* 1863, p. 125; *Gray, List Gallinæ Brit. Mus.* p. 43 (1867): *Melliss, Ibis*, 1870, p. 104 [St. Helena, introduced]; *Elliot, Mon. Phas.* ii. pl. 39 (1872); *Ussher, Ibis*, 1874, p. 71 [Gold Coast]; *Feilden, Ibis*, 1889, p. 490.

Numida galeata, *Pall. Spic. Zool.* i. fasc. iv. p. 13 (1767).

La Peintade, *D'Aubent. Pl. Enl.* ii. pl. 10 [no. 108].

Guinea Pintado, *Lath. Gen. Syn.* ii. pt. ii. p. 685 (1783); *id. Gen. Hist.* viii. p. 144 (1823).

Numida rendallii, *Ogilby, P. Z. S.* 1835, p. 103; *Fraser, Zool. Typ.* pl. 62 (1841–2).

Numida maculipennis, *Swains. B. W. Afr.* ii. p. 226 (1837) [Senegal].

Numida marchei, *Oustal. Ann. Sci. Nat.* (6) xiii. Art. 1 bis (1882) [Gaboon]; *id. N. Arch. Mus.* (2) viii. p. 305, pl. xiv. (1885).

Adult. Differs from *N. coronata* and from all the allied species in having a wide collar of vinous grey covering the upper part of the mantle and chest; the black feathers on the nape are continued in a thin line almost to the base of the helmet; the white spots on the mantle are smaller and less uniformly round: the helmet is very similar in shape to that of *N. mitrata* or *N. ptilorhyncha*, but the wattles at the angle of the gape are very much wider. Bare skin on the sides of the face and neck, chin, and wattles red, rest of neck bluish; helmet horn-colour: legs and feet reddish dusky. Total length 25 inches, wing 10·5, tail 6, tarsus 2·8, middle toe (with claw) 2·2.

In *immature specimens* many of the white spots of the adult are represented by bars and markings of white, especially on the wings and tail, middle of back, and breast.

Hab. West Africa, Senegambia, southwards through Ashantee to Gaboon; Cape de Verd Is., Annobon, St. Thomas.

a. Ad. sk.	Africa.	India Museum [P.].
b, c. Ad. sk.	West Africa.	Purchased.
d. Ad. sk.	R. Gambia.	Governor Rendall. (Type of *N. rendalli*, Ogilby.)
e, f. Juv. sk.	R. Gambia.	Governor Rendall.
g. Ad. sk.	Bathurst (*Sir A. Moloney*).	Shelley Coll.
h. Ad. sk.	Jamaica.	Mr. Gosse [C.].
i, k. Skeletons.		
l. Sternum.		

Hybrid between Pavo cristatus *and* Numida meleagris. *See* p. 371.

2. Numida coronata.

Numida meleagris, *Steph.* (*nec Linn.*) *in Shaw's Gen. Zool.* xi. pl. 17 (1819).

Numida coronata, *Gray, List of B.* pt. iii. *Gall.* p. 29 (1844); *id. List of Gallinæ Brit. Mus.* p. 43 (1867); *Gurney, Ibis*, 1868, pp. 253, 463 [Natal]; *Finsch & Hartl. Vög. Ost-Afr.* p. 568 (1870); *Elliot, Mon. Phas.* ii. pl. 40 (1872); *Heugl. Orn. N.O.-*

Afr. iii. p. 876 (1873); *Ayres, Ibis*, 1877, p. 346 [Transvaal]; *Cab. J. f. O.* 1878, p. 244 [Teita, Ukambani]; *Fisch. & Reich. J. f. O.* 1878, p. 250; *Fisch. J. f. O.* 1878, p. 294 [Takungu]; *Ayres, Ibis*, 1880, p. 265; *Butl., Feild., & Reid, Zool.* (3) vi. p. 358 (1882) [Natal]; *Shelley, Ibis*, 1882, p. 360 [Mashona]; *Böhm, J. f. O.* 1882, p. 197 [Kakoma]; *Schalow, J. f. O.* 1883, p. 341; *Fischer, Zeit. ges. Orn.* i. p. 380 (1884); *Sharpe's ed. Layard's B. S. Afr.* p. 581 (1884) [part.]; *Böhm, J. f. O.* 1885, pp. 40, 53, 64, 67 [Gonda]; *Fisch. J. f. O.* 1885, p. 119 [Pangani, Ngaruku, Ngurumán, Naiwaschia]; *Reich. J. f. O.* 1887, p. 51 [Kibaia], 1889, p. 270 [Unguru]; *Hartl. Abh. nat. Ver. Brem.* xii. p. 39 (1891) [Ussongo, E. Unguro].

Numida mitrata, *Sclat.* (*nec Pall.*) *P. Z. S.* 1862, p. 12; *Layard, B. S. Afr.* p. 266 (1867) [part.]; *Sperl. Ibis*, 1868, p. 291 [Zanzibar].

? Numida cornuta, *Buckl. Ibis*, 1874, p. 386 [Matabele].

Adult. Bony helmet long, elevated, and compressed, and usually curved backwards; the base extends from the forehead to the occiput, and the height varies from 1 inch to 1·5. The general colour of the plumage is black, thickly spotted all over with white; the spots on the upper parts smaller than those on the under, and divided from one another by a network of dotted white lines; the feathers round the base of the neck are more or less barred with narrow black and white bands; a band of elongate black feathers on the nape; over the naked head and neck a few hairs are scattered, most numerous below the eye; each of the white spots along the margin of the outer web of the secondaries takes the form of a short oblique band. Upper parts of the head and wattles at the angles of the gape red; neck bluish purple; bill yellowish horn-colour, darker at the base; legs and feet dark horn-brown. Total length 20·5 inches, wing 11, tail 6·4, tarsus 3·1, middle toe (with claw) 2·65.

Hab. Eastern S. Africa and East Africa.

a. Ad. sk.	South Africa.	General Hardwicke [P.]. (Type of species.)
b, c. Ad. sk.	South Africa, Dec.	Earl of Derby [P.].
d. ♂ ad. sk.	Rhinoster River, Orange Free State, May (*T. Ayres*).	J. H. Gurney, Esq. [P.].
e. Ad. sk.	Potchefstroom, Transvaal.	F. A. Barrett, Esq. [P.].

3. Numida marungensis.

Numida mitrata, *Bocage* (*nec Pall.*), *J. Ac. Lisb.* no. viii. p. 349 (1870) [part. Caconda]; *id. J. f. O.* 1876, p. 307.

Numida cornuta, *Bocage* (*nec Finsch & Hartl.*), *J. Ac. Lisb.* no. xxiv. p. 278 (1878) [Caconda].

Numida coronata, *Bocage* (*nec Gray*), *Orn. Angola*, p. 397 (1881) [part.]; *Sharpe's ed. Layard's B. S. Afr.* p. 581 (1884) [part., Benguela]; *Schalow, J. f. O.* 1886, p. 412 [Qua Mpara]; ? *Matschie, J. f. O.* 1887, p. 139 [Boga-Katani, Karema], 1887, p. 147 [Marungu].

Numida coronata marungensis, *Schalow, Zeit. ges. Orn.* i. p. 105 (1884) [Marungu].

Numida coronata, var., *Schalow, J. f. O.* 1886, p. 430, 1887, p. 228.

Adult. Differs from the male of *N. coronata* in being much larger, in having the helmet less elevated and stouter; and the fine black and white bars on the base of the neck continued on to the chest. Naked skin of the face and throat ashy tinted with red; helmet, sides of the face, and front of the crown flesh-colour: bill horny green; tarsus dark purple. Total length 27 inches, wing 12·5, tail 7·4, tarsus 3·5, middle toe (with claw) 3·15.

Hab. West Africa, ranging from Benguela to Marungu, west of Lake Tanganyika.

a. ♂ ad. sk.	Caconda, Benguela, May (*Anchieta*).	Shelley Coll.
b. ♂ ad. sk.	Caconda, Nov. (*Anchieta*).	Lisbon Museum [P.].

4. Numida cornuta.

Numida mitrata, *Gray* (*nec Pall.*), *List of B.* pt. iii. *Gall.* p. 29 (1844); *id. Gen. B.* iii. p. 501 (1845); *id. List Gallinæ Brit. Mus.* p. 43 (1867); *Layard, B. S. Afr.* p. 266 (1867) [part.]; *Bocage, J. Ac. Lisb.* no. iv. p. 326 (1867) [Rio Corcco], no. viii. p. 349 (1870) [part., Huilla]; *id. J. f. O.* 1876, p. 307.

Numida cornuta, *Finsch & Hartl. Vög. Ost-Afr.* p. 569 (1870); *Gurney's ed. Anderss. B. Damaral.* p. 238 (1872) [Damara and Gt. Namaqua Land]: *Bocage, J. Ac. Lisb.* no. xvii. p. 41 (1874) [Cunene R.]; *id. J. f. O.* 1876, p. 306.

Numida coronata, *Bocage* (*nec Gray*), *J. Ac. Lisb.* no. xii. p. 275 (1871), no. xiv. p. 199 (1873) [Cunene R.]; *Sharpe's ed. Layard's B. S. Afr.* p. 581 (1884) [part., Mossamedes].

Adult. Easily distinguished from *N. coronata* by the shape of the bony helmet, which is less than half the breadth and nearly cylindrical; only a few feathers below the naked neck show traces of bars, and the white spots are continuous over the whole plumage; but this character is not of much importance, for in the type specimen of *N. coronata* the bars at the base of the neck are broken into irregular spots. Naked skin of face clear blue; helmet vermilion; naked part of the neck purplish blue, wattles the same, scarlet at the extremity. Total length 21·5 inches, wing 10·4, tail 5·8, tarsus 2·7, middle toe (with claw) 2·4.

Hab. Western S. Africa, Great Namaqua-Land, Damara-Land, and Mossamedes.

a. Ad. st.	Damara-Land.	Capt. Alexander [P.].
b. Ad. sk.	Rio Coroca, Mossamedes (*Anchieta*).	Shelley Coll.
c. ♀ ad. sk.	Huilla, Mossamedes (*Anchieta*).	Lisbon Mus. [P.].

5. Numida mitrata.

Numida mitrata, *Pall. Spic. Zool.* i. fasc. iv. p. 18, pl. 3 (1767) [Madagascar]; *Gmel. S. N.* i. pt. ii. p. 745 (1788); *Lath. Ind. Orn.* ii. p. 622 (1790); *Bonnat. Tabl. Encycl. Méth.* i. p. 192, pl. 85. fig. 2 (1791); *Temm. Pig. et Gall.* ii. p. 444 (1813), iii. p. 682 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 261 (1819); *Sclat. P. Z. S.* 1863, p. 125, 1864, p. 114 [Uzaramo]; *id. Ibis*, 1864, p. 300 [Comoro Is.];

Kirk, Ibis, 1864, p. 330 [Zambesi]; *Gray, List Gallinæ Brit. Mus.* p. 43 (1867); *Finsch & Hartl. Vög. Ost-Afr.* p. 570 (1870); *Elliot, Mon. Phas.* ii. pl. 41 (1872); *Hartl. Vög. Madag.* p. 275 (1877); *Fischer, Zeit. ges. Orn.* i. p. 380 (1884); *id. J. f. O.* 1885, p. 119 [Dar-es-Salaam, Bagamoyo, Maurui, Mkaramo, Pari]; *Meyer, Vog.-Skel.* pt. x. pl. 99 (1886); *Reich. J. f. O.* 1887, p. 51 [Uzeguha]; *Sibree, Ibis*, 1891, p. 560.

Mitred Pintado, *Lath. Gen. Syn.* ii. pt. ii. p. 688 (1783); *id. Gen. Hist.* viii. p. 148 (1823).

Querelea mitrata, *Bonap. C. R.* xlii. p. 876 (1856).

Querelea tiarata, *Bonap. C. R.* xlii. p. 876 (1856).

Numida tiarata, *Hartl. Orn. Madagas.* p. 68 (1861); *Sclat. P. Z. S.* 1863, p. 125; *Roch & Newt. Ibis*, 1863, p. 168; *Newt. Ibis*, 1863, p. 454 [Madagascar], 1865, p. 153 [Is. of Rodriguez]; *id. P. Z. S.* 1865, p. 836; *Schl. P. Z. S.* 1866, p. 425 [Nossi-bé, Mayotte, introduced]; *Grandid. Rev. et Mag. Zool.* 1867, p. 418; *Pollen et Van Dam, Recherch. Madag.* p. 118 (1868) [Bouzy]; *Sharpe, P. Z. S.* 1870, p. 399; *Newt. P. Z. S.* 1877, p. 301 [Anjuan, Mauritius]; *Shelley, P. Z. S.* 1879, p. 678 [Grand Comoro].

Numida tiara, *Gray, List Gallinæ Brit. Mus.* p. 44 (1867).

Numida mitrata, *var.* tiarata, *Grandid. Hist. Madag., Ois.* ii. p. 500 (1885).

Adult. Very similar in plumage and appearance to *N. coronata*, but may be at once recognized by the shape of the helmet, which is much smaller and nearly conical in shape, the base measuring 1 inch in length and the height 0·7. The feathers of the lower part of the neck and upper chest are finely barred with black and white. Top of the head scarlet, helmet paler; rest of the naked skin on the sides of the face and neck blue; wattles blue, tipped with red: legs and feet brownish horn; bill yellowish horn, reddish towards the base. Total length 20 inches, wing 10·5, tail 6·2, tarsus 3·2, middle toe (with claw) 2·6.

Hab. East Africa, Comoro Is., Madagascar, Rodriguez, and other islands, into which it has probably been introduced.

a. ♂ ad. sk.	Mombasa, August.	G. C. Mackenzie, Esq. [P.].
b. Ad. sk.	Zambesi.	Sir J. Kirk [P.].
c. Ad. sk.	Grand Comoro (*Kirk*).	Shelley Coll.
d. Ad. sk.	Madagascar.	Purchased.
e. Ad. sk.	Madagascar (*Bewsher*).	Shelley Coll.
f–h. Pull. sk.	Madagascar, March.	W. Deans Cowan [C.].
i. ♀ ad. sk.	Rodriguez (*H. H. Slater*).	Transit of Venus Exp.
k. Sternum.	Rodriguez.	Transit of Venus Exp.

6. Numida ptilorhyncha.

Numida ptylorhyncha, *Licht., Less. Traité d'Orn.* p. 498 (1831); *id. Compl. de Buff.* ii. p. 209 (1837).

Numida ptilorhyncha, *Rüpp. N. Wirbel.* p. 184 (1835–40); *Gray, List of B.* pt. iii. *Gall.* p. 30 (1844); *id. Gen. B.* iii. p. 501, pl. 128 (1845); *Licht. Rüpp. Syst. Uebers.* pp. 102, 105, pl. 39 (1845) [Abyssinia, Sennaar, Kordofan]; *Licht. Cat. Mus. Berl.* p. 86 (1854); *Heugl. Syst. Uebers.* p. 50 (1855) [Abyssinia up to 8000

feet]; *Brehm, J. f. O.* 1855, pp. 481, 486, 493, 1857, pp. 84, 91, 382; *Heugl. SB. Ak. Wien*, xix. p. 302 (1856); *id. Ibis*, 1859, p. 343 [coast of Abyssinia]; *Blyth, J. A. S. Beng.* xxix. p. 386 (1860); *Heugl. J. f. O.* 1862, p. 409, 1864, p. 272; *Hartm. J. f. O.* 1863, p. 319; *Sclat. P. Z. S.* 1863, p. 125; *Antin. J. f. O.* 1865, p. 69; *Blanf. Zool. Abyss.* p. 421 (1870); *Finsch & Hartl. Vög. Ost-Afr.* p. 570 (1870); *Finsch, Trans. Z. S.* vii. p. 291 (1872); *Elliot, Mon. Phas.* ii. pl. 42 (1872); *Heugl. Orn. N.O.-Afr.* iii. p. 872 (1873); *Antin. & Salvad. Cat. Ucc.* p. 137 (1873); *Salvad. Ann. Mus. Civ. Genov.* xxi. p. 212 (1884); *Shelley, P. Z. S.* 1888, p. 48 [Tingasi].

Numida meleagris, *Lefeb. Abyss., Ois.* p. 142 (1845–50).

Numida ptilorhynchus, *Gray, List Gallinæ Brit. Mus.* p. 43 (1867).

Adult. Resembles the male of *N. mitrata*, but differs from this as well as from all the allied species in having a bunch of horny bristles at the base of the culmen: these bristles vary greatly in length and number; in some fully adult specimens they are largely developed, while in others they are very short and few in number. The upper half of the neck is thinly covered with black feathers; the margins of the outer webs of the secondaries are finely vermiculated with black and white; the white spots on the greater secondary coverts are more or less confluent and form oblique white bands. In some specimens the inner webs of the primaries have two or three rows of white spots, in others they are uniform dark brown or with only a few spots near the extremity. The absence or presence of white spots is apparently purely individual, and has nothing to do with age or sex. Bare skin of neck, face, and wattles blue; helmet and bristles pale horny: legs reddish dusky. Total length 19 inches, wing 11, tail 6·4, tarsus 3·2, middle toe (with claw) 2·7.

Hab. Equatorial and North-east Africa, Tingasi, Shoa, Abyssinia, Bogos-Land, Suakim, Sennaar, and Kordofan.

a. Head only.	Near Suakim.	Capt. R. H. Penton [P.].
b–d. Ad. sk.	Abyssinia.	Purchased.
e. Ad. sk.	Senafé, Abyssinia, May (*W. Jesse*).	Salvin-Godman Coll.
f. ♀ ad. sk.	Koomayli, Abyssinia, April (*W. Jesse*).	Tweeddale Coll.
g. ♂ ad. sk.	Araflé, Abyssimia, June (*W. Jesse*).	Tweeddale Coll.
h. ♂ ad. sk.	Anseba Valley, Bogos-Land. Aug.	W. T. Blanford, Esq. [C.].
i, k. ♂ ♀ ad. sk.	Shoa, Feb., April (*Sir W. Harris*).	India Museum [P.].
l, m. ♀ ad. sk.	Tingasi, Equatorial Africa, Aug.	Emin Pasha [P.].
n, o. Skeletons.		

46. GUTTERA.

	Type.
Guttera, *Wagl. Isis*, 1832, p. 1225	G. cristata.

A well-developed crest of black feathers extending from the base of the bill to the occiput, rest of the head and neck naked. Wattles at the angle of the gape very small or well developed.

1st primary considerably shorter than the 2nd, which is about equal to the 10th; 5th is perhaps slightly the longer.

Tarsus not armed with spurs, rather longer than middle toe and claw.

Tail composed of 16 feathers, moderately long and somewhat rounded. Tail-coverts reach within half an inch of the end of the tail-feathers.

General plumage black spotted with pale bluo, the outer webs of the first four or five secondaries margined with pure white.

Range. Africa.

Key to the Species.

(Sexes similar in plumage.)

A. A uniform black collar.

a. Black collar covering the upper part of the chest only. Naked skin on head and neck cobalt-blue, except chin and throat which are red ..... *cristata*, p. 381.

b. Black collar covering the whole chest and usually more or less washed with chestnut. Naked skin dark purple, black round the eye and yellowish grey round the back of the neck* ..... *edouardi*, p. 382.

B. Plumage spotted with pale blue right up to the bare skin of the neck.

c. Crest full and curly. Naked skin on the top of the head, round the eye, and on the chin and throat red, rest purplish blue. Wattles rudimentary, red ..... *pucherani*, p. 383.

d. Crest of thin erect or semi-erect feathers. Naked skin dark (? purplish blue). Wattles well-developed, dark blue ..... *plumifera*, p. 384.

1. Guttera cristata.

Numida cristata, *Pall. Spic. Zool.* i. fasc. iv. p. 15, pl. 2 (1767); *Gm. S. N.* i. pt. ii. p. 746 (1788); *Lath. Ind. Orn.* ii. p. 622 (1790); *Bonnat. Tabl. Encycl. Méth.* i. p. 192, pl. 85. fig. 3 (1791); *Temm. Pig. et Gall.* ii. p. 448 (1813), iii. p. 682 (1815) [part.]; *Steph. in Shaw's Gen. Zool.* xi. p. 263 (1819); *Yarr. Tr. Linn. Soc.* xv. p. 379, pl. 12 (1827); *Jard. Nat. Lib., Orn.* iii. p. 228, pl. 28 (1836); *Hartl. Orn. W.-Afr.* p. 199 (1857) [Sierra Leone, Ashantee, Aguapim]; *Sclat. P. Z. S.* 1863, p. 126; *Finsch & Hartl. Vög. Ost-Afr.* p. 572 (1870) [part.]; *Elliot, Mon. Phas.* ii. pl. 45 (1872); *Ussher, Ibis*, 1874, p. 71 [Gold Coast]; *Büttikofer, N. Leyd. Mus.* vii. p. 230 (1885), x. p. 98 (1888) [Liberia].

Crested Pintado, *Lath. Gen. Syn.* ii. pt. ii. p. 688, pl. 62 (1783); *id. Gen. Hist.* viii. p. 148, pl. 122 (1823).

Guttera cristata, *Wagl. Isis*, 1832, p. 1225.

Numida plumifera, *Sharpe* (*nec Cassin*), *Ibis*, 1872, p. 73 [Accra].

Adult. General plumage black, spotted all over with small round dots of bluish white, and most of the feathers are very narrowly

* See note on *G. edouardi*.

edged with the same colour. Top of the head covered with a full long crest of curling black feathers; a uniform black collar round the base of the neck extending in front onto the upper part of the chest; primaries dark brown spotted with bluish white, or uniform with only the outer web of the inner ones marked with irregular oblique lines and dots of bluish white; secondaries with the ground-colour of the outer web black, of the inner dark brown, the first four or five have the outer web margined with white and all are ornamented with longitudinal bluish-white lines, those on the inner webs formed by the confluence or semiconfluence of rows of numerous dots. Rudimentary wattles at the angles of the gape and naked skin on head and neck cobalt-blue, except chin and throat which are red: bill horny yellow, blue at the base; legs and feet brownish lead-colour. Total length 20 inches, wing 10·2, tail 5·1, tarsus 3, middle toe (with claw) 2·4.

Hab. W. Africa, Sierra Leone to the Gold Coast.

a. Ad. sk.	Sierra Leone.	Mrs. W. P. Manger [P.].
b, *c*. Ad. sk.	Denkera, Gold Coast (*H. T. Ussher*).	Shelley Coll.
d. Skeleton.	West Africa.	

2. Guttera edouardi.

Numida cristata, *Less.* (*nec Pall.*) *Traité d'Orn.* p. 498 (1831) [Cape of Good Hope]; *Kirk*, *Ibis*, 1864, p. 330 [Zambesi]; *Finsch & Hartl. Vög. Ost-Afr.* p. 572 (1870) [part.]; ? *Sharpe's ed. Layard's B. S. Afr.* p. 586 (1884) [Benguela].

Numida edouardi, *Hartl. J. f. O.* 1867, p. 36 [Natal]; *id. Ibis*, 1870, p. 444; *Sclat. P. Z. S.* 1871, p. 495.

Numida pucherani, *Gray*, *List Gallinæ Brit. Mus.* p. 44 (1867) [Zambesi]; *Sharpe's ed. Layard's B. S. Afr.* p. 586 (1884).

Numida verreauxi, *Elliot*, *Ibis*, 1870, p. 300 [Natal]; *Sclat. P. Z. S.* 1870, p. 383 [Natal]; *Layard*, *Ibis*, 1871, pp. 105, 106 [Zululand]; *Elliot*, *Mon. Phas.* ii. pl. 44 (1872); *Gurney*, *Ibis*, 1873, p. 255 [Natal]; *Sharpe's ed. Layard's B. S. Afr.* p. 585 (1884) [Natal]; *Seebohm*, *Ibis*, 1887, p. 350.

? Numida edwardi, *Bocage*, *J. Ac. Lisb.* no. xii. p. 275 (1871) [Benguela].

Numida sp., *Sclat. P. Z. S.* 1890, p. 86, pl. xii. [Zambesi].

Adult male and female. Differ from *G. cristata* only in having the black collar surrounding the base of the neck extended over the whole chest and usually more or less washed with chestnut *. Bill

* I am at present unable, from the evidence at hand, to absolutely settle the question which Mr. Sclater (P. Z. S. 1890, p. 86) has raised regarding the coloration of the naked skin of the head and neck in this species. Mr. Elliot describes live specimens (types of his *N. verreauxi*) obtained in Natal as follows:—"Black about the eyes, sides and back of neck light blue, and throat from the base of the bill to the feathers of the breast bright red. The skin of the neck full behind, forming a plait about midway, and falling in a kind of fold over the feathers of the lower part." This description may have agreed with

yellowish horn; legs and feet ashy. Total length 20 inches, wing 10·4, tail 5·1, tarsus 3·1, middle toe (with claw) 2·7.

Hab. South Africa, Natal, Zulu-Land to the Zambesi; ? Benguela.

a. Ad. st.	South Africa.	
b, *c*. Ad. sk.	South Africa.	Purchased.
d. Ad. sk.	Natal, Dec.	Zool. Soc. Coll. (Type of *N. verreauxi*.)
e, *f*. ♂ ♀ ad. sk.	Natal (*T. Ayres*).	Sharpe Coll.
g. ♂ ad. sk.	Natal (*T. Ayres*).	Gurney Coll.
h. ♀ ad. sk.	Zulu Land, June (*Gordge*).	Shelley Coll.
i. Ad. sk.	Zambesi.	Sir John Kirk [P.].
k. Ad. sk.	Victoria Falls, Zambesi.	Sir John Kirk [P.].
l, *m*. ♀ ad. sk.	Mozambique, May, July.	Lord Lilford [P.].

n. Imperfect skeleton.

3. Guttera pucherani.

? Numida ægyptiaca, *Lath. Ind. Orn.* ii. p. 622 (1790).

La Peintade d'Egypte, *Bonnat. Tabl. Encycl. Méth.* i. p. 193 (1791).

Egyptian Pintado, *Lath. Gen. Syn. Suppl.* ii. p. 272 (1802); *id. Gen. Hist.* viii. p. 147 (1823).

Numida cristata, *Shaw & Nodd.* (*nec Pall.*) *Nat. Misc.* pl. 757; *Layard, Ibis*, 1861, p. 120, 1864, p. 133; *id. B. S. Afr.* p. 267 (1867) [Zanzibar].

Numida pucherani, *Hartl. J. f. O.* 1860, p. 341 [Zanzibar]; *Sclat. P. Z. S.* 1863, p. 126, 1864, p. 114 [Ugogo]; *Sperl. Ibis*, 1868, p. 291; *Finsch & Hartl. Vög. Ost-Afr.* p. 574 (1870); *Elliot, Mon. Phas.* ii. pl. 46 (1872); *Fisch. & Reich. J. f. O.* 1878, p. 250 [Wito]; *Fisch. J. f. O.* 1878, pp. 293, 294, 1879, pp. 284, 300 [Malindi]; *id. & Reich. J. f. O.* 1880, p. 140; *Shelley, P. Z. S.* 1881, p. 597 [Melinda, Pangani]; *Fisch. Zeit. ges. Orn.* i. p. 381 (1884); *id. J. f. O.* 1885, p. 119 [Zanzibar, Tombatu Is., Bagamoyo, Pangani, Ungú, Wapokomoland]; *Reich. J. f. O.* 1887, p. 51 [Uzeguha; *Shelley, Ibis*, 1888, p. 295 [Kaké, Taveita]; *id. P. Z. S.* 1889, p. 371 [Kilimanjaro, Tana R.].

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one of Mr. Elliot's types now before me and with two specimens from Mozambique, but it is impossible to tell from dried skins, which look all dark. On the other hand, the specimen described and figured by Mr. Sclater and obtained near the Victoria Falls, Zambesi, "seems to differ," he says, "in having a conspicuous fold of naked skin at the back of the neck of a pale yellowish-grey colour, the naked skin on the throat not red but leaden grey, and a slightly feathered chin." This description applies to the great majority of our series of *G. edouardi* from Natal, Zulu-land, and Zambesi. It may be that the birds described as having the throat bright red are old birds in the breeding-season, and that the birds with the yellowish-grey neck and leaden-grey throat are younger examples; but, even supposing Mr. Elliot's statement to be correct, there can be no doubt that all the specimens before me belong to one and the same species, *G. edouardi*. Mr. Ayres (Ibis, 1873, p. 256) says "the bare skin of the sides of the head, chin, throat, and upper neck is black, but *whitish* on the occiput." This note is made from specimens which were being hawked about the town of D'Urban, and, as no doubt the dark purple skin on the sides of the head, chin, throat, and upper neck turns black soon after death, this description agrees well enough with Mr. Sclater's figure and description of the live bird in the Zoological Gardens.

Numida granti *, *Grant*, *Walk across Africa*, p. 37 (1864) [Ugogo]; *Elliot*, *P. Z. S.* 1871, p. 584; *id. Mon. Phas.* ii. pl. 43! (1872); *Hartl. Abh. nat. Ver. Brem.* xii. p. 39 (1891) [Nguru].
Numida ellioti. *Bartlett*, *P. Z. S.* 1877, p. 652, pl. lxv. [Mombasa]; *Sclat. P. Z. S.* 1880, p. 539.
Guttera pucherana, *Cab. J. f. O.* 1878, p. 244.

Adult male and female. Differ from *G. cristata* and *G. edouardi* in having the spotting continued right up to the base of the naked neck. The naked skin round the eye and top of the head, the chin and throat, and the rudimentary wattles at the angle of the gape are red; the back and sides of the neck blue, and the plait of skin at the back of the neck is much larger and deeper than in the above-mentioned species. Total length 20 inches, wing 10·8, tail 5, tarsus 3·6, middle toe (with claw) 2·7.

Hab. East Africa, from Zanzibar to the Tana R., and westwards into the interior.

a. Ad. sk.	Kilimanjaro.	F. J. Jackson, Esq. [P.].
b. Ad. sk.	Melinda (*Kirk*).	Shelley Coll.
c. Ad. sk.	Masai-Land.	H. C. V. Hunter, Esq. [P.].
d. Ad. sk.	Pangani River (*Kirk*).	Shelley Coll.

4. Guttera plumifera.

Numida plumifera, *Cassin*, *P. Ac. Philad.* viii. p. 321 (1856); *id. Journ. Ac. Philad.* iv. p. 6, pl. 2 (1858) [Cape Lopez]; *Du Chaill. Expl. Equat. Afr.* p. 155 (1861); *id. Ibis*, 1861, p. 303; *Sclat. P. Z. S.* 1863, p. 126; *Gray*, *List Gallinæ Brit. Mus.* p. 44 (1867); *Elliot*, *Mon. Phas.* ii. pl. 47 (1872).

Adult male and female. Closely resemble *G. pucherani*, but the crest is composed of thin straight feathers growing upwards; the bluish-white spots on the body are rather smaller, wider apart, and whiter. The wattles at the angle of the gape are much more developed (·5 inch in length). The naked skin of the head and neck is stated by Cassin to be "dark," probably bluish purple; bill bluish horn, lighter at the tip; legs dark blackish brown †. Total length 20 inches, wing 9·6, tail 4·5, tarsus 3, middle toe and claw 2·5.

Less mature specimens have the naked parts, especially on the chin and throat, more or less thinly covered with black feathers.

Hab. W. Africa, from Cape Lopez to Loango.

a, *b*. Ad. sk.	Cape Lopez.	P. B. Du Chaillu [C.].
c. ♀ ad. sk.	Landana.	M. L. Petit [C.].

* There can be little doubt that the bird met with by Grant was *G. pucherani*; this can be seen at once from the coloration of the naked skin of the head and neck, which is correctly described. If the figure of *N. granti* given in Elliot's 'Monograph' had the spotting on the breast continued up to the neck, the plate would do well enough for *G. pucherani*, of which the coloration of the naked skin is incorrectly represented on pl. 46.

† The one described by Cassin is evidently immature, for he says:—"throat and upper part of neck covered with short velvet-like feathers in the male, naked in the female."

47. ACRYLLIUM.

Type.
Acryllium, *Gray, List Gen. B.* p. 61 (1840) ..... A. vulturinum.
Agryllium, *Gray, List Gallinæ Brit. Mus.* p. 43 (1867) A. vulturinum.

Head and upper part of neck naked; a horseshoe-shaped band of feathers extending from the ear-coverts round the nape. Plumage of neck, chest, and mantle developed into long pointed hackles.

Tail long, wedge-shaped, composed of 16 feathers; middle pair much elongated and pointed, one-third longer than the second pair and much more than twice as long as the outer pair.

Tarsi in the male with four or five knobs on each.

1st primary shorter than 2nd, which about equals 9th; 6th slightly longest.

Range. East Africa from the Pangani R. to Somali-Land, and westwards to Kilimanjaro. West Africa?

1. Acryllium vulturinum.

Numida vulturina, *Hardw. P. Z. S.* 1834, p. 52 [W. Africa]; *Gould, Icon. Av.* pl. 8 (1837); *Gray, Gen. B.* iii. p. 501 (1845); *Hartl. Syst. Orn. West-Afr.* p. 200 (1857); *id. J. f. O.* 1861, p. 266; *Layard, Ibis*, 1861, p. 120 [N.W. Madagascar, domestic]; *Sclat. P. Z. S.* 1863, p. 126; *Poll. Ned. Tijdschr.* p. 39 (1863); *Layard, Ibis*, 1864, p. 133 [East coast north of Zanzibar]; *Gray, List Gallinæ Brit. Mus.* p. 44 (1867); *Kirk, P. Z. S.* 1867, p. 953 [Lamu]; *Schl. & Poll. Recherch. Madag.* p. 119 (1867); *Sclat. Ibis*, 1868, p. 501; *id. P. Z. S.* 1870, p. 280 [Barava, Somali]; *Finsch & Hartl. Vög. Ost-Afr.* p. 575 (1870); *Kirk, P. Z. S.* 1872, p. 789; *Elliot, Mon. Phas.* ii. pl. 38 (1872); *Fischer & Reichenow, J. f. O.* 1880, p. 140 [Barava]; *Sclat. List Vert. An.* p. 296, fig. 53 (1883); *Shelley, Ibis*, 1885, p. 414 [Somali-land]; *id. P. Z. S.* 1889, p. 371 [Useri River, Tana, Duruna]; *Fischer, J. f. O.* 1885, p. 119 [Barava, Massa, Pangani R.].

Acryllium vulturinum, *Gray, List Gen. B.* p. 61 (1840); *Hartl. J. f. O.* 1854, p. 209; *Cab. J. f. O.* 1878, p. 244; *Fischer, J. f. O.* 1878, p. 294, 1879, p. 300 [R. Tana]; *id. Zeit. ges. Orn.* i. p. 381 (1884) [Chaga Dist.].

Adult male. Head and upper half of the neck naked, with the exception of a horseshoe-shaped band of velvety reddish-brown feathers extending from the ear-coverts round the back of the nape; lower neck, mantle, and chest covered with long pointed hackles, black with wide white shaft-stripes, and margined with pale cobalt except the shorter ones at the back of the neck, the longer hackles are also more or less minutely dotted with white and gradually merge into the long pointed feathers of the upper back, which are black with narrower white shaft-stripes and minutely marked all over with wavy dotted lines of white; lower back, rump, wing, tail-coverts, and thighs black, minutely dotted all over with white, and covered with small, rounded, black-edged spots; sides and flanks similar, but washed with purple; the secondary-coverts have also

oblique lines of white on the outer web; primaries blackish brown, spotted with white towards the tip and the inner ones mottled with the same colour along the margin of the outer web; inner secondaries brownish black, outer black, all more or less spotted with white at the extremity, and, except the first two, with oblique white bars on the outer web and oblique rows of white spots on the inner, the first four are also margined with reddish brown, and the third and fourth have a submarginal band of purplish blue, while the fifth is narrowly margined with the same colour. Breast and belly cobalt-blue, black down the middle. Long pointed middle pair of tail-feathers black, minutely dotted all over and spotted with white towards the base; outer ones black, largely spotted all over with white. Naked parts of the head and neck cobalt-blue. Total length 30 inches, wing 12·2, tail 11·3, tarsus 4·1, middle toe (with claw) 3.

Adult female. Differs from the male only in having no spurs on the tarsi and being a little smaller. Total length 27 inches, wing 12, tail 10, tarsus 3·8, middle toe and claw 2·9.

In *immature specimens* the hackles on the neck and chest are interspersed with short feathers transversely barred with black and white, some of the wing-coverts are also barred with white, and the back of the neck is thinly covered with feathers.

A *very young female* has the head still covered with rufous down, longitudinally barred with black; the plumage of the upper parts alternately barred with black, buff, and rufous, and tipped with buff; the chin and throat white, and the underparts black, barred and fringed with pale buff.

Hab. Same as that of the genus.

a, b. ♂ ♀ ad. sk.	Useri River, Kilimanjaro, July.	H. C. V. Hunter, Esq. [P.].
c. Ad. st.	Zanzibar Coast.	Purchased.
d. Ad. sk.	West Africa (*Capt. Probyn*).	Hardwicke Coll. (Type of species.)
e. ♀ pull. sk.	Bred in confinement.	P. L. Sclater, Esq. [P.].

48. MELEAGRIS.

	Type.
Meleagris, *Linn. S. N.* i. p. 268 (1766)	M. gallopavo.
Gallopavo, *Brünnich, Zool. Fundamenta*, p. 86 (1772).	M. gallopavo.
Cenchramus, *Gray, List Gen. B.* p. 78 (1841)	M. gallopavo.
Gallopavus, *Des Murs* (1854), *fide Gray, Hand-l. B.* ii. p. 262 (1870)	M. gallopavo.

Skin of the head and neck naked and carunculated, with only a few hair-like feathers; an erectile process situated on the forehead.

Tail composed of 18 feathers, broad, rounded, the outer feathers not much shorter than the middle ones. Upper tail-coverts are two-thirds of the length of the middle pair of tail-feathers.

1st primary about equal to the 10th, 5th slightly the longest.

Tarsus more than half as long again as the middle toe and claw, and armed in the males with a large stout spur.

Range. U.S. of N. America; Central America; Mexico, Guatemala, Yucatan, and British Honduras.

Key to the Species.

A. None of the tail-feathers with subterminal metallic ocelli, though some of the outer feathers usually show traces of a metallic band. (Males with a pair of strong spurs on the tarsi, females without.)
  a. Upper tail-coverts margined with white..... *gallopavo*, p. 387.
  b. Upper tail-coverts margined with rufous buff . *ellioti*, p. 388.
  c. Upper tail-coverts margined with dark chestnut or chestnut-maroon.
    a'. White bars on the primaries as wide or nearly as wide as the dark interspaces.... *americana*, p. 389.
    b'. White bars on the primaries much narrower than the dark interspaces ..... *osceola*, p. 390.
B. All the tail-feathers with a subterminal greenish-blue ocellus shot with purple. (Males with a pair of very strong spurs on the tarsi, females with small blunt knobs.) ..... *ocellata*, p. 391.

1. Meleagris gallopavo.

Crested Turkey, *Albin, Nat. Hist. B.* ii. p. 30, pl. 33 (1738) [domestic var.].

The Turkey Cock, *Albin. Nat. Hist. B.* iii. p. 33, pl. 35 (1740).

Meleagris gallopavo, *Linn. S. N.* i. p. 268 (1766); *Gmel. S. N.* i. pt. ii. p. 732 (1788); *Lath. Ind. Orn.* ii. p. 618 (1790); *Steph. in Shaw's Gen. Zool.* xi. p. 156, pl. 8 (1819); *Gray, List Gallinæ Brit. Mus.* p. 42 (1867); *id. Hand-l. B.* ii. p. 262 (1870); *Melliss, Ibis*, 1870, p. 104 [St. Helena]; *Bendire, Am. Nat.* vii. p. 326 (1873); *Coues, B. N.-West*, p. 392, footnote (1874) [New Mexico, Arizona]; *Hensh. Auk*, iii. p. 80 (1886) [New Mexico].

The Turkey, *Pennant, Phil. Trans.* lxxi. p. 67, pl. iii. (1781) [part., Mexico].

Meleagris mexicana, *Gould, P. Z. S.* 1856, p. 61; *id. Am. J. Sci.* xxii. p. 139 (1856); *id. Edinb. N. Phil. J* n. s. iv. p. 371 (1856); *id. Ann. Mag. N. H.* (2) xix. p. 107 (1857); *Bryant, P. Bost. Soc. N. H.* vi. p. 158 (1857); *Baird, B. N. Amer.* p. 618 (1860) [part.]; *Sclat. P. Z. S.* 1863, p. 125; *Coues, P. Ac. Philad.* 1866, p. 93 [S. Rocky Mts.]; *Elliot, B. N. Amer.* ii. pl. 38 (1869); *Coop. Calif. Orn.* i. p. 523 (1870); *Allen, Bull. Mus. C. Z.* ii. p. 343 (1871); *Elliot, Mon. Phas.* i. pl. 32 (1872); *v. Pelz. Ibis*, 1873, p. 35.

Meleagris gallopavo, var. mexicanus, *Baird, Brew., & Ridgw. N. Amer. B.* iii. p. 410 (1874) [part.].

Meleagris gallipavo, *Coues, Key N. A. B.* p. 576 (1884).

Meleagris gallopavo mexicana, *Scott, Auk*, iii. p. 389 (1886) [Arizona]; *A. O. U. Check-list*, p. 177 (1886); *Ridgw. Man. N. Amer. B.* p. 207 (1887) [part.]; *Bendire, N. Amer. B.* p. 116, pl. iii. fig. 15 (1892) [part.].

Adult male. With a long bunch of coarse black hair-like feathers

situated on the middle of the breast; feathered part of the back of the neck, upper back, lesser, median, and greater secondary-coverts and underparts copper-bronze, shot with purplish green and fiery gold, the feathers except on the neck, mantle, and chest margined with black; lower back and rump black, with a subterminal metallic purplish band; upper tail-coverts with the basal part barred with chestnut and the extremity widely tipped with white. Primaries, primary-coverts, and bastard-wing nearly equally barred with dark brown and white, the white bars on the inner webs more or less mottled with brown; secondaries similar, but the white bars are narrower and the brown paler and mixed with rufous, especially on the outer quills, which are somewhat glossed on the outer web with purplish green and red-gold. Flank-feathers and under tail-coverts black, with a wide subterminal metallic band and widely tipped with white. Tail-feathers mottled with dull chestnut and black, with a wide subterminal black band and white tip, the outer feathers have a slight metallic band across the middle of the black. Naked skin on head and neck pale crimson; bill orange-red; legs and feet coral-red. Total length ca. 43 inches, wing 21, tail 15·5, tarsus 7.

Adult female. Differs from the male in having the feathers up the middle of the back of the neck continued in a narrow band over the crown to the base of the small erectile process; no bunch of hair-like feathers on the breast and no spurs; the plumage is very similar though not so bright, and the lower back and all the underparts are fringed with white like the feathers of the rump and upper tail-coverts. Total length ca. 40 inches, wing 17·9, tail 14·3, tarsus 5·3.

Hab. Tablelands of North Mexico, Arizona, New Mexico, and Western Texas.

a. Juv. sk.	Santa Fé Mts., New Mexico, July (*H. W. Henshaw*).	Salvin-Godman Coll.
b. ♂ ad. sk.	Mexico. (Type of *Meleagris mexicana*, Gould.)	
c. ♀ ad. sk.	Ciudad Durango (*Forrer*).	Salvin-Godman Coll.
d. ♂ ad. et imm. st. [domestic var.].	Midland Counties, England.	
e. ♂ ad. st. [domestic var. with tufted head].	England.	
f, *g*. Skulls.		Yarrell Coll.

Subsp. *a*. Meleagris ellioti.

Meleagris mexicana, *Baird* (*nec Gould*), *B. N. Amer.* p. 618 (1860) [part.].

Meleagris gallopavo, *Dresser* (*nec Linn.*), *Ibis*, 1866, p. 25 [S. Texas, N.E. Mexico]; *Sennett, Bull. U. S. Geol. Surv.* iv. no. 1, p. 53 (1878) [Rio Grande, Texas], and v. no. 3, p. 427 (1879) [Lomita]; *Brown, Bull. Nutt. Orn. C.* viii. p. 41 (1882) [S.W. Texas].

Meleagris gallopavo, var. mexicanus, *Baird, Brew., & Ridgw. N. Amer. B.* iii. pp. 403, 410 (1874) [part.].

Meleagris gallopavo, var. intermedia, *Sennett, Bull. U. S. Geol. Surv.* v. p. 428 (1879).

Meleagris gallopavo mexicana, *Ridgw. Man. N. Amer. B.* p. 207 (1887) [part., E. Mexico, S. Texas]; *Bendire, N. Am. B.* p. 116 (1892) [part.].

Meleagris gallopavo ellioti, *Sennett, Auk,* 1892, p. 167, pl. iii. [E. Mexico & S. Texas].

Adult male. Differs from *M. gallopavo* in having the feathers of the lower rump, upper and under tail-coverts, and tail-feathers tipped with pale rufous buff (though it must be remarked that the colour varies greatly in different specimens from the same locality, in one it is almost chestnut while in another it is pale whitish buff). The white bars on the primaries are much narrower than in *M. gallopavo*, and not so wide as in *M. americana*.

Adult female. Differs from the male in the same points as the female of *M. gallopavo*.

Hab. Vera Cruz and Tamaulipas, Eastern Mexico, and South-west Texas.

a–c. ♂ ad. et imm. sk.	Tamaulipas, Mexico (*W. B. Richardson*).	Salvin-Godman Coll.
d–g. ♂ ad. et vix ad. sk.	Hidalgo, Texas, April (*F. B. Armstrong*).	Salvin-Godman Coll.

2. Meleagris americana.

Gallopavo sylvestris, *Catesby, Carol.* i. App. p. xliv (1730); *Briss. Orn.* v. p. 162 (1760); *Leconte, P. Ac. Philad.* ix. p. 179 (1857).

The Turkey, *Pennant, Phil. Trans.* lxxi. p. 79 (1781) [North America].

Meleagris americana,* *Bartram, Trav.* p. 290 (1791) [Pennsylvania]; *Hildr. Am. J. Sci.* xxix. p. 85 (1836) [Virginia]; *Gray, Hand-l. B.* ii. p. 262 (1870); *Loomis, Bull. Nutt. Orn. C.* iv. p. 217 (1879) [S. Carolina].

Meleagris palawa, *Barton, Med. & Phys. J.* ii. pt. i. pp. 163–4 (1805) [United States].

Meleagris silvestris, *Vieill. N. Dict. d'Hist. Nat.* ix. p. 447 (1817).

Meleagris fera, *Vieill. Gal. Ois.* ii. p. 10, pl. 201 (1825); *Gray, List Gallinæ Brit. Mus.* p. 42 (1867).

Meleagris gallopavo, *Bonap. (nec Linn.) Am. Orn.* i. p. 79, pl. ix. (1825); *Aud. Orn. Biog.* i. pp. 1 & 33, pls. i. & vi. (1831) [distribution]; *Nutt. Man.* i. p. 638 (1832); *Hitchc. Rep. Geol. Mass.* p. 549 (1833) [Massachusetts]; *Jard. Nat. Lib., Orn.* iii. p. 117, pls. i. & ii. (1836); *Aud. B. Am.* v. p. 42, pls. 287, 288 (1842); *Thomps. Hist. Vermont,* p. 101 (1842) [S. Vermont]; *Linsl. Am. J. Sci.* xliv. p. 264 (1843) [New England]; *De Kay, Zool. N. Y.* p. 199, pl. 76. fig. 172 (1844); *Gray, List of B.* pt. iii. *Gall.* p. 29 (1844); *Aud. Orn. Biog.* v. p. 559 (1849) [Massachusetts, Vermont, Maine (now extinct)]; *Max. J. f. O.* 1858, p. 426; *Sclat. P. Z. S.* 1863, p. 125; *Allen, Mem. Bost. Soc.* i. p. 500 (1868) [Iowa]; *Caton, Am. Nat.* iii. p. 28 (1869), vii. p. 431 (1873); *Allen, Bull. Mus. C. Z.* ii. p. 342 (1871) [part.], iii. p. 181 (1872) [Kansas]; *Trippe, Pr. Bost. Soc.* xv. p. 240 (1872) [Iowa]; *Elliot, Mon. Phas.* i. pl. 30 (1872); *Snow, B. Kansas,* no. 193 (1873); *Hatch, Pr. Minn. Acad.* i. p. 61 (1874) [S. Minnesota]; *Brewer, P. Bost. Soc.* xvii. p. 445 (1875); *Merr. Rev. B. Conn.* p. 99 (1877); *Scott, Bull. Nutt. Orn. C.* iv. p. 147 (1879) [W. Missouri]; *Stearns & Coues, N. Engl. B. L.* ii. p. 143 (1883) [extinct]; *A. O. U. Check-list,* p. 177 (1886); *Brewst. Auk,* iii. p. 103 (1886) [W. N. Carolina];

* No description, but as the name has been frequently used I have retained it.

Ridgw. Man. N. Amer. B. p. 207 (1887) [part., *nec* Florida]; *Bendire, N. Am. B.* p. 112, pl. iii. fig. 14 (1892) [part., *nec* Florida].

Meleagris gallopavo, var. americana, *Coues, Key N. A. B.* p. 232 (1872); *id. B. N.-West*, p. 391 (1874) [S. Minnesota, Iowa, Kansas, Indian Ter., Texas]; *Merr. Tr. Connect. Ac.* iv. p. 98 (1877) [Connecticut, extinct]; *Brown, Bull. Nutt. Orn. C.* iv. p. 12 (1879) [Alabama].

Meleagris gallopavo, var. gallopavo, *Baird, Brew., & Ridgw. N. Amer. B.* iii. p. 404 (1874).

Meleagris gallopavo, var. occidentalis, *Allen, Bull. Nutt. Orn. C.* i. p. 55 (1876) [extinct in New England].

Meleagris gallipavo americana, *Coues, Bull. Nutt. Orn. C.* v. p. 100 (1880); *Nehrl. Bull. Nutt. Orn. C.* vii. p. 175 (1882) [S.E. Texas]; *Hay, Bull. Nutt. Orn. C.* viii. p. 93 (1882) [Lower Mississippi]; *Ridgw. Bull. Nutt. Orn. C.* viii. p. 21 (1882) [Indiana]; *Beckh. J. Cinc. Soc.* vi. p. 145 (1883) [Kentucky]; *Nehrl. J. f. O.* 1883, p. 275 [Illinois]; *Bailey, Bull. Nutt. Orn. C.* viii. p. 41 (1883) [Georgia]; *Coues, Key N. A. B.* p. 576 (1884); *Agersb. Auk*, ii. p. 285 (1885) [S.E. Dakota].

Meleagris gallipavo, *Koch, MT. orn. Ver. Wien*, 1889, pp. 129–134 [Pennsylvania].

Adult male. Differs chiefly from *M. gallopavo* in having the lower rump, upper and under tail-coverts, flanks, and tail-feathers tipped with deep chestnut-maroon, and the white bars on the wings a trifle narrower.

Adult female. Is perfectly similar in plumage to the male, but the feathers of the lower back and underparts are fringed with chestnut; the feathers of the nape extend to the crown, and the pectoral bunch and spurs are wanting.

Hab. Eastern United States of North America, ranging north to Southern Canada, south to Georgia and Eastern Texas, and west to the edge of the Great Plains.

a–c. ♂ ♀ ad. st.	North America.	
d. ♀ ad. sk.	North America, July (*Viscount Gage*).	Audubon Coll.
e. Skeleton.	Canada.	E. K. Karslake, Esq. [P.].
f, g. Skeletons.		

Subsp. *a.* **Meleagris osceola.**

Meleagris occidentalis *, *Bartram, Trav.* p. 83 (1791) [near Pincolata, Florida].

Meleagris gallopavo, *Allen* (*nec Linn.*), *Bull. Mus. C. Z.* ii. p. 342 (1871) [E. Florida].

Meleagris gallopavo osceola, *Scott, Auk*, 1890, p. 376 [Tarpon Springs, Florida].

Adult male. Distinguished from *M. americana* by the very narrow white bands on the quills, and the paler chestnut tips to the tail-coverts.

Hab. Florida.

a, b. ♂ ad. sk.	Tarpon Springs, Florida, Feb., Mar. (*W. E. D. Scott*).	Salvin-Godman Coll.

* No description, and the name is misleading, the subspecies being only found in the eastern State of Florida.

3. Meleagris ocellata.

The Turkey, *Pennant, Phil. Trans.* lxxi. p. 79 (1781) [part., Yucatan].

Meleagris ocellata, *Cuv. Mém. Mus. d'Hist. Nat.* vi. p. 1, pl. i. (1820) [Gulf of Honduras]; *Temm. Pl. Col.* v. pl. 16 [no. 112] (1824); *Less. Traité d'Orn.* p. 490 (1831); *Jard. Nat. Lib., Orn.* iii. p. 143, pl. iii. (1836); *Cabot, P. Bost. Soc.* i. p. 73 (1842); *id. J. Bost. Soc.* iv. p. 246 (1842) [part.]; *Gray, List of B.* pt. iii. *Gall.* p. 29 (1844); *Sclat. & Salv. Ibis*, 1859, p. 225; *Moore, P. Z. S.* 1859, p. 62 [Belize, Peten]; *Taylor, Ibis*, 1860, p. 311; *Sclat. P. Z. S.* 1861, p. 402, pl. xl., & 1863, p. 125; *Gray, List Gallinæ Brit. Mus.* p. 42 (1867); *id. Hand-l. B.* ii. p. 262 (1870); *Elliot, Mon. Phas.* i. pl. 33 (1872); *Boucard, P. Z. S.* 1883, p. 461 [Yucatan]; *Ridgw. Man. N. Amer. B.* p. 207 (1887).

Meleagris aureus, *Vieill. Tabl. Encycl. Méth.* i. p. 361 (1823).

Adult male. Feathers of the mantle, scapulars, and chest have the basal half black, the terminal half brass-green shading into purplish black towards the extremity, margined by a narrow dark black line and fringed with greenish copper. On the lower back and rump the basal parts of the feathers are finely mottled with white, their extremities gradually increase in brilliance and the margins in width till on the upper tail-coverts and tail the colours attain their greatest magnificence; here the brass-green of the mantle is replaced by brilliant greenish-blue bands changing to purple and forming subterminal ocelli on the tail-feathers; the wide margins are rich copper-red with green reflections. The lesser and median wing-coverts are mostly golden green with shades of dark blue and narrow black margins; the greater secondary-coverts reddish copper shot with golden green and purple and shading into greenish gold towards the ends of the inner webs. Primaries, bastard-wing, and primary-coverts brownish black barred with white, widest on the outer webs of the inner quills; bastard secondary with the outer web uniform brown, rest with the outer web mostly white, the dark bars being confined to the part next the quill; inner webs of all dark brown barred with white; the outermost secondaries have the dark bars glossed with metallic golden green. Breast and belly black, with copper-red margins to the feathers; flanks and under tail-coverts like the lower back. Head and neck covered with naked blue skin, scarlet round the eye, and ornamented with small red wart-like wattles, the largest situated between the eyes; the erectile process on the forehead blue with red warts at the tip. Bill, legs, and feet red; the tarsus armed with a long stout sharp spur. Total length ca. 40 inches, wing 16·5, tail 13·5, tarsus 5 5.

Adult female resembles the male; but the plumage is not so brilliant and the ocelli at the ends of the tail-feathers are much reduced. The erectile process is very small, and the great spurs are represented by small wart-like knobs. Total length ca. 33 inches, wing 14·2, tail 13·1, tarsus 4·4.

Hab. Central America; Guatemala, Yucatan, and British Honduras.

a. ♂ ad. sk.	Central America.	Zool. Soc. Coll.
b–g. ♂ ♀ ad. et ♂ imm. sk	Buctzotz, Yucatan, April (*G. F. Gaumer*).	Salvin-Godman Coll.
h, i. ♂ ♀ ad. sk.	Yasha, Peten, Guatemala, April (*O. Salvin*).	Salvin-Godman Coll.
k. ♀ ad. sk.	W. District, British Honduras, March (*F. Blancaneaux*).	Salvin-Godman Coll.
l. ♂ ad. st.	British Honduras.	Earl of Derby [P.].
m–p. ♀ ad. et pull. st.	British Honduras.	Purchased.
q. Sternum.		

49. DENDRORTYX.

Type.

Dendrortyx, *Gould, Mon. Odontoph.* pl. xx. or pt. i. (1844), *Introd.* p. 20 (1850) ..... D. macrourus.

Sexes practically similar. A short occipital crest.

1st primary much shorter than the 10th; 5th longest.

Tail composed of 12 feathers, the outer pair much shorter than the middle pair, which are as long or nearly as long as the wing.

Tarsus shorter than the middle toe and claw.

Bill very stout and short; claws moderate.

Range. Central America, from Southern Mexico to Costa Rica.

Key to the Species.

a. Chin and throat black (feathers of chin sometimes with whitish middles) .... *macrourus* ♂ ♀, p. 392.
b. Chin and throat grey ..... *barbatus* ♂ ♀, p. 393.
c. Chin and upper part of throat white, lower part with chestnut black-edged centres ..... *leucophrys* ♂ ♀, p. 394.

1. Dendrortyx macrourus.

Ortyx macroura, *Jard. & Selb. Ill. Orn.* i. text to pl. 38 and pl. 49 (1825–39) [Mexico]; *Jard. Nat. Lib., Orn.* iv. p. 128, pl. xii. (1834).

Tetrao marmorata, *La Llave, Reg. Trim.* i. p. 144 (1831); *id. La Nat. Mex.* vii. App. p. 65 (1884).

Dendrortyx macrourus, *Gould, Mon. Odontoph.* pt. i. pl. 20 (1844); *Gray, List Gallinæ Brit. Mus.* p. 73 (1867); *id. Hand-l. B.* ii. p. 272 (1870).

Adult male. Head, chin *, and throat black, the longer occipital feathers with a triangular reddish-brown spot at the extremity, and forming a moderate crest; an incomplete white superciliary stripe commencing above the middle of the eye and continued backwards above the ear-coverts; a similar parallel stripe below the ear-coverts and bordering the sides of the throat. Feathers of the neck, mantle, chest, and sides chestnut in the middle and widely edged with grey on the sides, on the middle of the chest and sides the chestnut centres are paler and less distinct; lower back, rump,

* In some specimens the feathers of the chin have whitish middles.

and upper tail-coverts dull olive-brown, finely mottled with black, and with a narrow irregular black and white band at the extremity. Wing-coverts (except the primary-coverts) and scapulars olive-grey, finely mottled with black, mostly with ill-defined chestnut centres, and irregular black and white spots or markings on the sides; secondaries very similar to the longer coverts but with dark centres; primaries and primary-coverts brown, mottled with buff on the outer web. Breast and middle of belly dirty white, shading into brownish grey on the flanks, which are mottled with dusky and have indistinct rufous centres; thighs and under tail-coverts like the upper tail-coverts, but the former are paler. Tail brownish black, mottled, especially on the centre pair, with whitish buff or buff. Iris, naked skin round the eye, bill, and tarsi coral-red; claws dark brown. Total length 15 inches, wing 6·3, tail 6·5, tarsus 2, middle toe and claw 2·1.

Adult female. Resembles the male but is smaller. Total length 13·3 inches, wing 5·9, tail 5·3, tarsus 1·75, middle toe and claw 1·8.

Hab. S. Mexico, Colima, Guerrero, Oaxaca.

a, b. Ad. et pull. st.	Mexico.	Purchased.
c. Ad. sk.	Mexico (*White*).	Salvin-Godman Coll.
d–f. ♂ ♀ ad. sk.	Sierra Nevada de Colima, 12,000 ft., April, Dec. (*W. B. Richardson & W. Lloyd*).	Salvin-Godman Coll.
g. Ad. sk.	Omilteme, 8000 ft., State of Guerrero, July (*D. W. Smith*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Tonaguia, Oaxaca, Feb. (*M. Trujillo*).	Salvin-Godman Coll.

2. Dendrortyx barbatus.

Dendrortyx barbatus, *Licht., Gould, Mon. Odontoph.* pt. ii. pl. 22 (1846) [Jalapa]; *Gray, List Gallinæ Brit. Mus.* p. 74 (1867); *id. Hand-l. B.* ii. p. 272 (1870).

Adult male and female. Top of the head and ear-coverts brown, forehead paler, the occipital feathers forming a fairly long crest; superciliary stripe, cheeks, throat, and fore part of neck dark grey, chin and middle of throat usually paler; back and sides of the neck chestnut, edged on the sides with grey; mantle similar, but the grey sides are narrower and there is an irregular black and white spot on the margin of both webs; rest of the upper parts very similar to *D. macrourus*, but the ends of the scapulars and outer secondaries are mostly deep black, irregularly edged and marked with buff round the extremity; the chest, breast, and sides of belly are dull light chestnut; rest of the underparts nearly similar to *D. macrourus*. The ground-colour of the quills and outer tail-feathers reddish chestnut. Bill, naked skin round the eye, legs and feet red. Total length 13·6 inches, wing 6·2, tail 4·8, tarsus 1·95, middle toe and claw 2·1.

An *immature bird* differs from the adult in having most of the feathers of the nape and mantle blotched with black at the

extremity, edged with olive-brown finely mottled with dusky, and with buff shaft-stripe dilated at the extremity; only the middle of the chest and breast rust-coloured and barred and mottled with dusky, the sides and flanks marked and barred with black and white.

Hab. Jalapa, Vera Cruz, Mexico.

a, b. Ad. st. et sk.	Jalapa, Vera Cruz, Mexico.	Purchased of M. Verreaux.
c–f. Ad. et juv. sk.	Jalapa, Vera Cruz, Mexico (*de Oca*).	Salvin-Godman and Gould Colls.

3. Dendrortyx leucophrys.

Ortyx leucophrys, *Gould, P. Z. S.* 1843, p. 132 [Coban].
Dendrortyx leucophrys, *Gould, Mon. Odontoph.* pt. ii. pl. 21 (1846); *Sclat. & Salvin, Ibis*, 1859, p. 226; *Gray, List Gallinæ Brit. Mus.* p. 73 (1867); *id. Hand-l. B.* ii. p. 272 (1870); *Boucard, P. Z. S.* 1878, pp. 40, 42 [Volcano of Irazu, Costa Rica, 7000 ft.]; *Zeledon, P. U. S. Nat. Mus.* viii. p. 112 (1886) [Costa Rica].

Adult male and female. Differ chiefly from *D. macrourus* in having the forehead, lores, chin, and upper part of throat white; the superciliary stripe complete; the white stripe below the ear-coverts absent; the occipital feathers dull rufous and shorter; the lower part of the throat and neck similar to the mantle, which has the dark chestnut stripe down the middle of the feathers edged on either side with black; the lower back, rump, and upper tail-coverts uniform olive-brown finely mottled with dusky, and almost if not entirely devoid of buff markings, those on the wing-coverts and secondaries much reduced; the breast and rest of underparts more dusky grey, with well-marked rufous stripes down the middle; and the quills and outer tail-feathers with the ground-colour chestnut. Bill black, lower mandible orange below; naked space round the eye, tarsi and feet orange-red. Total length 13·6 inches, wing 6, tail 5·7, tarsus 1·95, middle toe and claw 2·1.

Hab. Guatemala and Costa Rica.

a–c. Ad. sk.	Dueñas, Guatemala, Nov. (*O. Salvin*).	Salvin-Godman Coll.
d. ♀ ad. sk.	Panajachel, 5000 ft., Solola, Guatemala, May (*W. B. Richardson*).	Salvin-Godman Coll.

50. CALLIPEPLA.

Type.
Callipepla, *Wagl. Isis*, 1832, pp. 277, 1229 ..... C. squamata.

Sexes similar. Crest short, not extending much beyond the feathers of the head.

1st primary equals the 8th; 4th longest.

Tail composed of 14 feathers, three fourths the length of the wing.

Tarsus shorter than the middle toe and claw.

Range. South-western United States of N. America and Mexico.

Key to the Species.

a. Middle of breast and belly pale buff; male without a dark chestnut patch in the middle of the belly ..... *squamata*, p. 395.

b. Middle of breast and belly deeper buff or ochraceous; male with a dark chestnut patch in the middle of the belly ..... *castaneiventer*, p. 396.

1. Callipepla squamata.

Ortyx squamatus, *Vigors, Zool. Journ.* v. p. 275 (1830) [Mexico]; *Abert, P. Ac. Philad.* iii. p. 221 (1847) [New Mexico].

Ortyx squamata, *Less. Ill. Zool.* text to pl. 52 (1831).

Tetrao cristata, *La Llave, Rey. Trim.* i. p. 144 (1831); *id. La Nat. Mex.* vii. App. p. 65 (1884).

Callipepla strenua, *Wagl. Isis*, 1832, p. 278 [Mexico].

Callipepla squamata, *Gray, List Gen. B.* ed. i. p. 61 (1840); *Gould, Mon. Odontoph.* pt. i. pl. 19 (1844); *Gray, Gen. B.* iii. p. 514 (1846); *McCall, P. Ac. Philad.* v. p. 222 (1851) [Rio Grande]; *Cassin, Ill. B. Cal.* p. 129, pl. xix. (1853); *Baird, U. S. & Mex. Surv., Birds*, p. 23 (1859); *id. B. N. Amer.* p. 646 (1860); *Coues, P. Ac. Philad.* 1866, p. 95; *Gray, List Gallinæ Brit. Mus.* p. 78 (1867); *id. Hand-l. B.* ii. p. 273 (1870); *Coop. Calif. Orn.* i. p. 556 (1870); *Coues, B. N.-West*, p. 441 (1872); *id. Key N. Amer. B.* p. 238 (1872); *Baird, Brew., & Ridgw. N. Amer. B.* iii. p. 487 (1874); *Brewst. Bull. Nutt. Orn. C.* viii. p. 33 (1883) [Arizona]; *Coues, Key N. Am. B.* p. 593 (1884); *Stephens, Auk*, ii. p. 226 (1885) [Tucson, Arizona]; *Scott, Auk*, iii. p. 387 (1886) [Arizona]; *A. O. U. Check-list*, p. 169 (1886); *Lloyd, Auk*, iv. p. 187 (1887) [W. Texas]; *Ridgw. Man. N. Am. B.* p. 191 (1887); *Thurber, Auk*, vii. p. 89 (1890) [Colfax Co., N. Mexico]; *Bendire, N. Am. B.* p. 18, pl. i. figs. 4, 5 (1892).

Callipepla squammata, *Gambel, Journ. Ac. Philad.* n. s. i. p. 219 (1849) [N. Mexico "and the adjoining parts of California!"].

Callipepla squamata pallida, *Brewst. Bull. Nutt. Orn. C.* vi. p. 72 (1881) [Rio San Pedro, Arizona].

Adult male. Forehead and sides of head grey, short occipital crest and ear-coverts brown, the former tipped with white; chin and throat whitish buff; neck, mantle, chest, and sides of breast grey, shading into pale whitish buff on the middle of the breast and belly, every feather margined with black, giving all these parts a beautiful scaled appearance, while across the middle of each feather of the underparts is a V-shaped dusky band or mark; wings, lower back, rump, and upper tail-coverts brownish grey, the longer scapulars and outer secondaries margined on the inner web with white; flanks grey, with white shaft-spots on the terminal half of the feathers; vent buff; under tail-coverts pale rufous buff, with usually a dark mark or band down the middle; tail grey, the outer feathers narrowly margined round the tips with white. Total length 10 inches, wing 4·8, tail 3·6, tarsus 1·2, middle toe and claw 1·35.

Adult female. Differs only from the male in having dusky

shaft-stripes to the feathers of the throat, inside the white margins to the inner webs of the secondaries a black marginal line, and the outer margins of the secondaries with indistinct buff mottlings. Total length 9·5 inches, wing 4·7, tail 3·4, tarsus 1·2, middle toe and claw 1·3.

Hab. New Mexico, Arizona, Western Texas, and North and Central Mexico from Chihuahua and San Luis Potosi as far south as the City of Mexico. ? S.E. California.

a–c. ♂ ♀ ad. sk.	San Pedro slope, Pinal Co., Arizona, Nov., Dec. (*W. E. D. Scott*).	Salvin-Godman Coll.
d–o. ♂ ♀ ad. et juv. sk.	New Mexico (*H. W. Henshaw*).	Salvin-Godman Coll.
p–r. ♂ ♀ ad. et imm. sk.	Engle, New Mexico, Oct. (*E. W. Nelson*).	Salvin-Godman Coll.
s, t. ♂ ♀ ad. sk.	Presidio Co., Texas, June (*W. Lloyd*).	Salvin-Godman Coll.
u–w. ♂ ♀ ad. sk.	Chupadero, Chihuahua, Mexico, Jan. (*W. Lloyd*).	Salvin-Godman Coll.
x, y. ♂ ad. sk.	San Diego, Chihuahua, Mexico, Feb. (*W. Lloyd*).	Salvin-Godman Coll.
z–f'. ♂ ♀ ad. sk.	San Luis Potosi, Mexico, July (*W. B. Richardson*).	Salvin-Godman Coll.
g' k'. ♂ ♀ ad. sk.	Plains of San Luis Potosi, Mexico, July (*W. B. Richardson*).	Salvin-Godman Coll.
l'. ♂ ad. sk.	Near the City of Mexico.	Salvin-Godman Coll.

Subsp. *a.* **Callipepla castaneiventer.**

Callipepla squammata, *McCall* (*nec Vig.*), *P. Ac. Philad.* v. p. 222 (1851).

Callipepla squamata, *Dresser* (*nec Vig.*), *Ibis*, 1866, p. 28 [S. Texas].

Callipepla squamata castanogastris, *Brewst. Bull. Nutt. Orn. C.* viii. p. 34 (1883) [Lower Rio Grande; E. Mexico]; *A. O. U. Check-list*, p. 169 (1886); *Ridgw. Man. N. Am. B.* p. 192 (1887); *Beckham, P. U. S. Nat. Mus.* x. pp. 640, 656 (1887) [S.W. Texas]; *Attwater, Auk*, ix. p. 233 (1892) [San Antonio, Texas]; *Beudire, N. Am. B.* p. 22, pl. i. figs. 6, 7 (1892).

Adult male and female. Differ from *C. squamata* in having the general colour of the middle feathers of the breast and belly deeper buff or ochraceous, and in the male a dark reddish-chestnut patch on the middle of the belly. (This patch is sometimes indicated in the female also.)

Hab. Tamaulipas, N.E. Mexico, and lower Rio Grande Valley, Texas.

a. ♀ ad. sk.	Rio Grande R., Texas, Feb. (*H. B. Butcher*).	Salvin-Godman Coll.
b–l. ♂ ♀ ad. sk.	Rio Grande City, Texas, March (*F. B. Armstrong*).	Salvin-Godman Coll.

m. ♂ ad. sk.	Fort Duncan, Rio Grande, Texas, Feb. (*H. E. Dresser*).	Salvin-Godman Coll.
n, o. ♂ ♀ ad. sk.	Eagle Pass, Rio Grande, Texas, Dec. (*H. E. Dresser*).	Salvin-Godman Coll.
p, q. ♂ ♀ ad. sk.	Benavides, Duval Co., Texas, Dec. (*F. B. Armstrong*).	Salvin-Godman Coll.
r. ♀ ad. sk.	Laredo, Texas, Feb. (*H. B. Butcher*).	Salvin-Godman Coll.
s, t. ♀ ad. st. et sk.	Mexico.	Gould & Eyton Colls.
u, v. ♂ ad. sk. et ♀ ad. st.	Mexico.	Purchased.
w–f'. ♂ ♀ ad. sk.	Nuevo Laredo, Tamaulipas, Mexico, March (*F. B. Armstrong*).	Salvin-Godman Coll.

51. OREORTYX.

Type.

Oreortyx, *Baird, B. N. Amer.* p. 642 (1860) ..... O. pictus.

Sexes similar. Crest very long.

1st primary falls between the 7th and 8th; the 3rd or 4th slightly the longest.

Tail composed of 12 feathers : $\frac{3}{5}$ of the length of the wing.

Tarsus shorter than the middle toe and claw.

Range. Western States of N. America, ranging northwards to Washington Territory, southwards through California to Cape St. Lucas, and westwards into Eastern Nevada.

1. Oreortyx pictus.

Ortyx picta, *Douglas, Trans. Linn. Soc.* xvi. p. 143 (1823) [California]; *Vigors, Zool. Journ.* iv. p. 490 (1829); *Less. Ill. Zool.* text to pl. 52 (1831); *Jard. & Selb. Ill. Orn.* ii. text to pl. 107.

Ortyx plumifera, *Gould, P. Z. S.* 1837, p. 42 [California]; *Aud. B. Amer.* v. p. 69, pl. 291 (1842).

Lophortyx plumifera, *Nutt. Man. Orn.* i. p. 791 (1840); *Coop. & Suckl. Rep. Expl. Miss. Riv.* xii. no. 3, p. 225 (1860).

Callipepla picta, *Gould, Mon. Odont.* pt. i. pl. 15 (1844); *Gambel, Journ. Ac. Philad.* (n. s.) i. p. 219 (1849); *Newberry, Rep. P. R. R. Surv.* vi. pt. iv. p. 93 (1857); *Gray, List Gallinæ Brit. Mus.* p. 79 (1867); *id. Hand-l. B.* ii. p. 274 (1870).

Perdix plumifera, *Aud. Orn. Biogr.* v. p. 226, pl. 423 (1849).

Oreortyx pictus, *Baird, B. N. Amer.* p. 642 (1860); ? *Dresser, Ibis*, 1866, p. 27 [S. Texas !]; *Coues, Ibis*, 1866, p. 266 [Cajon Pass, San Bernardino Mts.]; *Coop. Calif. Orn.* i. p. 546 (1870); *Coues, Key N. Am. B.* p. 237 (1872); *id. B. N.-West.* p. 440 (1874); *Baird, Brew., & Ridgw. B. N. Amer.* iii. pp. 475, 523 (1874); *Anthony, Auk*, iii. p. 164 (1886) [Washington Co., Oregon]; *Evermann, Auk*, iii. p. 92 (1886) [Ventura Co., Cal.]; *A. O. U. Check-list*, p. 168 (1886); *Ridgw. Man.* p. 191 (1887); *Belding, Occas. Pap. Cal. Ac. Sci.* ii. p. 9 (1890); *Bendire, N. Am. B.* p. 13 (1892).

Oreortyx picta, *Belding, P. U. S. Nat. Mus.* i. pp. 391–393, 438 (1879) [Central California].

Oreortyx picta plumifera, *Belding*, *P. U. S. Nat. Mus.* v. p. 533 (1883) [Cape St. Lucas, Lower Cal.]; *Stephens*, *Auk*, i. p. 355 (1884) [Colorado desert].

Orortyx picta, *Coues*, *Key N. Am. B.* p. 591 (1884).

Oreortyx pictus plumiferus, *A. O. U. Check-list*, p. 168 (1886); *Ridgw. Man.* p. 191 (1887); *Townsend*, *P. U. S. Nat. Mus.* x. pp. 199, 235 (1887) [N. California]; *Belding*, *Occas. Pap. Cal. Ac. Sci.* ii. p. 9 (1890); *Bendire*, *N. Am. B.* p. 14, pl. i. figs. 2, 3 (1892).

Oreortyx pictus confinis, *Anthony*, *P. Calif. Ac. Sci.* (2) ii. p. 74 (1889); *id. Zoe*, i. p. 5 (1890) [San Pedro Martir Range, Lower Cal.]; *Bendire*, *N. Am. B.* p. 17 (1892).

Adult male and female. An occipital crest of two very long black feathers; top of the head, back and sides of the neck, upper part of mantle (in males and some females) *, chest, and breast slate-grey; rest of upper parts olive-brown; the scapulars and outer secondaries margined on the inner web with white more or less mixed with pale rufous; a white band extending across the chin to the lores; throat and fore part of neck deep chestnut, margined on either side by a white band, which passes across the basal half of the ear-coverts; a black patch on the cheek below the eye often continued on the side of the throat in a line between the chestnut and white; upper part of the belly mostly chestnut; underparts and vent pale buff; sides and flanks irregularly marked and barred with chestnut, white, and black; thighs rufous; under tail-coverts black, with chestnut middles; tail-feathers dark olive-grey, finely mottled with black. Bill black; iris, legs, and feet brown. Total length 9·6 inches, wing 5·2, tail 3·3, tarsus 1·4, middle toe and claw 1·6.

A quite young bird in August has all the upper parts olive-brown, washed with rufous on the inner webs of the scapulars and outer secondaries, and all finely mottled with black and pale buff; many feathers of the mantle have also pale shafts, and the scapulars and some of the wing-coverts are blotched with black; the chestnut throat of the adult is black; the chest and upper breast dirty grey, most of the feathers with pale shafts and whitish spots at the tips; only a few of the chestnut feathers of the flanks are beginning

* Most of the males have the mantle grey, but in some specimens this colour is more or less mixed with olive-brown; on the other hand, most females have the olive-brown continued up the back of the neck to the crest, but some have the upper mantle more or less washed with grey. I have seen no males with the olive-brown going up to the crest, and no females have the back of the neck and mantle clear grey like the breast; but several specimens in intermediate plumage belong to both sexes. Ridgway, in his 'Manual,' p. 191, recognizes two subspecies of *Oreortyx* (*O. pictus* and *O. plumiferus*), and uses these *sexual* characters to distinguish them. He makes out that the brown-necked birds (females) are confined to the Coast-region, while those with grey neck and mantle (males) inhabit the Sierra Nevada. But in a good series of specimens from Carson, Nevada, I find many brown-necked specimens (all females) as well as grey, and from the Coast-region there is about an equal number of each.

to appear, and the middle of the belly is a mixture of indistinct dirty white and blackish bars.

Hab. Same as that of the genus.

a, b. ♂ ♀ ad. sk.	Portland, Oregon, Jan. (*H. W. Henshaw*).	Salvin-Godman Coll.
c. ♂ ad. st.	California.	Purchased.
d–f. ♂ ♀ ad. sk.	California.	Gould Coll.
g. ♂ ad. sk.	California.	Zool. Soc. Coll.
h, i. ♀ ad. sk.	California (*H. W. H. & E. W. Nelson*).	Salvin-Godman Coll.
k, l. ♂ ad. sk.	California.	Salvin-Godman Coll.
m. ♀ ad. sk.	Cloverdale, California, March (*H. W. H.*).	Salvin-Godman Coll.
n. ♂ ad. sk.	San Francisco, Cal., Oct. (*A. Forrer*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Bear Valley, Cal., June.	G. F. Morcom, Esq. [P.].
p. ♀ ad. sk.	Michigan Bluffs, Cal., Oct. (*F. Gruber*).	Salvin-Godman Coll.
q. Juv. sk.	Lake Begles, Cal.	F. Gruber, Esq. [C.].
r. Juv. sk.	Big Trees, Santa Cruz, Cal., Aug. (*L. Belding*).	Salvin-Godman Coll.
s. Pull. sk.	Calaveras Co., Cal., June (*L. Belding*).	Salvin-Godman Coll.
t. ♀ ad. sk.	Mountains near Fort Tejon, Cal., Aug. (*H. W. H.*).	Salvin-Godman Coll.
u, v. ♂ ♀ ad. sk.	San Bernardino Mts., Cal., April (*R. B. Herron*).	Salvin-Godman Coll.
w. ♂ ad. sk.	San Bernardino Mts., Cal., Oct. (*F. Stephens*).	Salvin-Godman Coll.
x, y. ♂ ♀ ad. sk.	Ballena, San Diego Co., Cal., May (*F. Stephens*).	Salvin-Godman Coll.
z. ♂ ad. sk.	Nigger Cañon, San Diego Co., Cal., May (*F. Stephens*).	Salvin-Godman Coll.
a'. ♀ ad. sk.	Cuyamaca Mts., San Diego Co., Cal., June (*F. Stephens*).	Salvin-Godman Coll.
b'. ♀ ad. sk.	Sierra Nevada, Cal.	Tweeddale Coll.
c', d'. ♂ ad. sk.	Walker's Basin, Cal., Nov. (*H. W. H.*).	Salvin-Godman Coll.
e'–n'. ♂ ♀ ad. sk.	Carson, Nevada, Nov., Dec. (*H. W. H.*).	Salvin-Godman Coll.

52. LOPHORTYX.

	Type.
Lophortyx, *Bonap. Comp. List B. Eur. & N. Amer.* pp. 42, 43 (1838)	L. californicus.

Sexes different. Crest in both sexes extending much beyond the feathers of the head.

1st primary falls between the 8th and 9th; 4th generally slightly longer than the 3rd and 5th.

Tail composed of 12 feathers, about $\frac{3}{4}$ the length of the wing. Tarsus shorter than the middle toe and claw.

Range. South-western United States of North America and Mexico.

Key to the Species.

A. Chin and throat uniform deep black; crest black.
  a. Feathers of the breast and belly edged with black; a chestnut patch in the middle of the belly ..... *californicus* ♂, p. 400.
  b. Feathers of the breast and belly not edged with black; a black patch in the middle of the belly ..... *gambeli* ♂, p. 403.
B. Chin and throat black, each feather margined all round with white; crest pale rufous; breast and belly with round white spots ... *douglasi* ♂, p. 404.
C. Chin and throat white, with dark shaft-stripes.
  c. Sides and flanks dark olive-brown, with white shaft-stripes; feathers of breast and belly margined with black ..... *californicus* ♀, p. 400.
  d. Sides and flanks chestnut, with white shafts; feathers of the breast and belly not margined with black ..... *gambeli* ♀, p. 403.
  e. Sides and flanks dull olive-brown, spotted with white on the sides; breast and belly spotted all over with white ..... *douglasi* ♀, p. 404.

1. Lophortyx californicus.

Tetrao californicus, *Shaw & Nodd. Nat. Misc.* ix. pl. 345 (1797 ?).
Perdix californica, *Lath. Ind. Orn. Suppl.* p. lxii (1801); *Temm. Pig. et Gall.* iii. p. 738 (1815); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 259 (1817); *Aud. Orn. Biogr.* v. p. 152, pl. 413 (1839).
Californian Quail, *Lath. Gen. Syn. Suppl.* ii. p. 281 (1802); *id. Gen. Hist.* viii. p. 328 (1823).
Ortyx californica, *Steph. in Shaw's Gen. Zool.* xi. p. 384 (1819); *Less. Ill. Zool.* text to pl. 52 (1831); *Jard. Nat. Lib., Orn.* iv. p. 126, pl. xi. (1834); *Jard. & Selb. Ill. Orn.* i. text to pl. 38, & ii. text to pl. 107; *Aud. B. Amer.* v. p. 67, pl. 290 (1842).
Coturnix californica, *Vieill. Tabl. Eneycl. Méth.* i. p. 367 (1823).
Ortyx californicus, *Less. Cent. Zool.* p. 188, pl. 60 (1830); *Hutton, Ibis*, 1870, p. 397 [New Zealand], 1871, p. 447; *id. Trans. N. Zeal. Inst.* 1870, p. 80.
Lophortyx californica, *Bonap. Comp. List*, p. 42 (1838); *Nutt. Man. Orn.* i. p. 789 (1840); *Baird, U. S. & Mex. Surv., Birds*, p. 22 (1859); *Coop. & Suckl. Rep. Expl. Miss. Riv.* xii. no. 3, p. 225 (1860); *Coues, B. N.-West.* p. 439 (1874); *Belding, P. U. S. Nat. Mus.* i. pp. 391, 392, 439 (1879) [Central California], v. pp. 528, 544 (1883) [W. & S. Lower California]; *Stephens, Auk*, i. p. 355 (1884) [Colorado Desert]; *Coues, Key N. Am. B.* p. 592 (1884).

Callipepla californica, *Gould, Mon. Odontoph* pt. i. pl. 16 (1844); *Gambel, Journ. Ac. Philad.* (n. s.) i. p. 218 (1849); *Newberry, Rep. P. R. R. Surv.* vi. pt. iv. p. 92 (1857); *Gray, List Gallinæ Brit. Mus.* p. 78 (1867); *id. Hand-l. B.* ii. p. 274 (1870); *A. O. U. Check-list*, p. 169 (1886); *Evermann, Auk*, iii. p. 92 (1886) [Ventura Co., Cal.]; *Townsend, P. U. S. Nat. Mus.* x. pp. 199, 235 (1887) [N. California, coast]; *Ridgw. Man. N. Am. B.* p. 193 (1887); *Belding, Occas. Pap. Cal. Ac. Sci.* p. 12 (1890); *Bendire, N. Am. B.* p. 23, pl. i. figs. 8–10 (1892).

Lophortyx californianus, *Gray, List of B.* pt. iii. *Gall.* p. 44 (1844); *Baird, B. N. Amer.* p. 644 (1860); *Coues, Ibis*, 1866, p. 265 [Soda Lake]; *Brown, Ibis*, 1868, p. 417 [Vancouver Is., introduced]; *Coop. Calif. Orn.* i. p. 549 (1870); *Coues, Key N. Am. B.* p. 238 (1872); *Baird, Brew., & Ridgw. N. Am. B.* iii. p. 479 (1874); *Coop. P. U. S. Nat. Mus.* ii. p. 251 (1880); *Drew, Auk*, ii. p. 14 (1885) [Denver, introduced].

Ortyx virginianus, *Hutton, Ibis*, 1867, p. 379 [New Zealand].

Lophortyx californicus brunnescens, *Ridgw. P. Biol. Soc. Wash.* ii. p. 94 (1884) [Santa Barbara, California].

Callipepla californica vallicola, *Ridgw. P. U. S. Nat. Mus.* viii. p. 355 (1886) [Interior valleys of California]; *A. O. U. Check-list* p. 169 (1886); *Townsend, P. U. S. Nat. Mus.* x. pp. 200, 235 (1887) [N. California, interior]; *Ridgw. Man. N. Am. B.* p. 192 (1887); *Jeffries, Auk*, vi. p. 221 (1889) [Santa Barbara, Cal.]; *Belding, Occas. Pap. Cal. Ac. Sci.* p. 12 (1890); *Bendire, N. Am. B.* p. 26 (1892).

Adult male. Forehead yellowish buff with dark shafts, bounded behind by a white band which crosses the head between the eyes, and is continued behind them in a white superciliary stripe; on each side of this band the head is black, shading into brown on the occipital region; a well-developed crest of black club-shaped feathers; chin, throat, and cheeks black, bounded by a white band which passes across the base of the black ear-coverts; back and sides of the neck, mantle, and chest grey; each feather of the former with a black marginal band, produced up the shaft and giving a **W**-shaped appearance; there is also a subterminal white spot on both webs; these last disappear on the feathers of the mantle, on the lower feathers of which the black margins also gradually disappear; the lower back, rump, and upper tail-coverts are olive-brown, washed with grey (in coast specimens), or grey washed with olive (in inland specimens); the wing-coverts, scapulars, and outer secondaries are usually rather darker, the latter edged, especially on the inner web, with buff; primaries and inner secondaries brownish, the middle of the breast buff; middle of belly chestnut, shading into white or whitish buff on the sides and underparts; all the feathers are margined and barred across the middle with black; the sides and flanks with white shaft-stripes; thighs and under tail-coverts buff, blackish down the middle; tail slate-grey. Total length 9·7 inches, wing 4·4, tail 3·6, tarsus 1·25, middle toe and claw 1·45.

Adult female. Differs chiefly from the male in having the crest shorter and browner, no black and white pattern on the head and throat, most of the feathers being dirty white with dark centres, the general colour of the neck, mantle, and chest brownish grey, and of

the underparts white, tinged with buff on the belly. Total length 9 inches, wing 4·3, tail 3·3, tarsus 1·2, middle toe and claw 1·4.

Young males and females somewhat resemble the female adult, but most of the feathers of the upper parts and chest have buff shafts; the wing-coverts, scapulars, and outer secondaries are mostly washed with rufous and finely mottled and marked with black: the throat, breast, and rest of underparts are whitish, the two latter indistinctly marked and barred with dusky; and the tail with transverse whitish mottlings. The adult feathers usually begin to appear first on the sides of the neck and chest.

Hab. Western States of N. America, ranging north to Washington, south as far as Cape St. Lucas, Lower California, and eastwards to Nevada. Introduced into various parts of the world.

a–c. ♂ ♀ ad. sk.	Whidley, Washington Terr., Dec. (*H. W. Henshaw*).	Salvin-Godman Coll.
d, e. ♂ imm. sk. et ♀ ad. st.	California.	Capt. Sir E. Belcher [P.].
f. ♀ ad. sk.	California.	G. Barclay, Esq. [P.].
g–i. ♂ ad. st. ♀ ad. et juv. sk.	California.	Gould & Verreaux Colls.
k. ♂ ad. sk.	California (*C. H. Merriam*).	Salvin-Godman Coll.
l–p. ♂ ♀ ad. sk.	Redwood, Cal., April (*H. W. H.*).	Salvin-Godman Coll.
q, r. ♂ ♀ ad. sk.	Big Trees, Santa Cruz, Cal. (*A. Forrer*).	Salvin-Godman Coll.
s, t. ♂ ♀ ad. sk.	Monterey, Cal., Oct. (*H. W. H.*).	Salvin-Godman Coll.
u, v. ♂ ♀ ad. sk.	Kernville, Cal., Oct. (*H. W. H.*).	Salvin-Godman Coll.
w–y. juv. et pull. sk.	Fort Tejon, Cal., Aug. (*J. Xantus*).	Salvin-Godman Coll.
z–n′. ♂ ♀ ad. et juv. sk.	Jolon, Cal., Sept., Oct. (*H. W. H.*).	Salvin-Godman Coll.
o′–q′. juv. et pull.	Santa Inez, Cal., Sept., Oct. (*H. W. H.*).	Salvin-Godman Coll.
r′–v′. ♂ ♀ ad. sk.	San Bernardino Co., Cal., Dec. (*H. W. H.*).	Salvin-Godman Coll.
w′. ♂ ad. sk.	Agua Caliente, San Bernardino Co., Cal., April (*R. B. Herron*).	Salvin-Godman Coll.
x′. ♀ ad. sk.	Cohuilla Valley, Cal., April.	G. F. Morcom, Esq. [P.].
y′–a″. ♂ ♀ ad. sk.	Colton, Cal., April & Dec. (*R. B. Herron & F. Stephens*).	Salvin-Godman Coll.
b″. ♂ ad. sk.	San Diego Co., Cal. (*C. H. Merriam*).	Salvin-Godman Coll.
c″–g″. ♂ ♀ ad. sk.	Ballena, San Diego Co., Cal., Feb., March (*F. Stephens*).	Salvin-Godman Coll.
h″, i″. ♂ ad. sk.	Colorado Desert, Cal., April (*F. Stephens*).	Salvin-Godman Coll.
k″–m″. ♂ ♀ ad. sk.	Cape St. Lucas, Lower California, Sept. (*J. Xantus*).	Salvin-Godman Coll.
n″, o″. ♂ ♀ ad. sk.	Carson, Nevada, Oct., Nov. (*H. W. H. & E. W. Nelson*).	Salvin-Godman Coll.
p″ s″. Juv. et pull. st.	Zoological Gardens.	Zool. Soc. Coll.

Hybrid between Lophortyx californicus *and* L. gambeli.

Lophortyx gambeli × L. californicus, *Henshaw, Auk*, ii. p. 247 (1885) [San Gorgonio Pass, S. California].

a, b ♂ ad. sk. Agua Caliente, San Gorgonio Pass, San Bernardino, Cal., March (*H. B. Herron*). Salvin-Godman Coll.

2. Lophortyx gambeli.

Lophortyx gambeli, *Nutt., Gambel, P. Ac. Philad.* 1843, p. 260 [West of California]; *McCall, P. Ac. Philad.* v. p. 221 (1851); *Baird, U. S. & Mex. Surv., Birds*, p. 23 (1859); *id. B. N. Amer.* p. 645 (1860); *Dresser, Ibis*, 1866, p. 28 [S. Texas]; *Coues, Ibis*, 1866, p. 46 [Arizona], p. 262 [Colorado Valley], p. 265 [Soda Lake]; *id. P. Ac. Philad.* 1866, p. 94; *Coop. Calif. Orn.* i. p. 553 (1870); *Coues, Key N. Am. B.* p. 238 (1872); *id. B. N.-West*, p. 432 (1874); *Baird, Brew., & Ridgw. B. N. Am.* iii. pp. 482, 523 (1874); *Brewst. Bull. Nutt. Orn. C.* viii. p. 32 (1883) [Tucson, Arizona]; *Coues, Key N. Am. B.* p. 593 (1884); *Belding, P. U. S. Nat. Mus.* vi. p. 344 (1884) [Sonora]; *Stephens, Auk*, i. p. 355 (1884) [Colorado Desert], ii. pp. 228, 231 (1885) [Arizona].

Callipepla venusta, *Gould, P. Z. S.* 1846, p. 70 [California].

Callipepla gambeli, *Gambel, Journ. Acad. Philad.* (n. s.) i. p. 219 (1849); *Gould, Mon. Odontoph.* pt. iii. pl. 17 (1850); *Cassin, Ill. B. Cal.* i. p. 45, pl. ix. (1853); *Gray, List Gallinæ Brit. Mus.* p. 79 (1867); *id. Hand-l. B.* ii. p. 274 (1870); *Scott, Auk*, iii. p. 388 (1886) [Arizona]; *A.O.U. Check-list*, p. 170 (1886); *Ridgw. Man. N. Am. B.* p. 193 (1887); *Johnson, Auk*, vi. p. 280 (1889) [Palm Springs, Cal.]; *Belding, Occas. Pap. Cal. Ac. Sci.* ii. p. 14 (1890); *Stephens, Auk*, vii. p. 297 (1890) [Colorado Desert]; *Bendire, N. Am. B.* p. 29, pl. i. figs. 11–14 (1892); *Wall, Auk*, x. p. 204 (1893) [San Bernardino, Cal.].

Lophortyx californicus, *Coues (nec Shaw & Nodd.), Ibis*, 1865, p. 165 [Arizona]; *Dresser, Ibis*, 1866, p. 27 [Devil's River].

Adult male is at once to be distinguished from *L. californicus* by having the forehead blacker; the back of the head chestnut; the feathers of the back of the neck without subterminal white spots; the chest with dark shafts; the middle of the belly black; the feathers of the breast and belly without black margins, and the feathers of the sides deep chestnut instead of grey. Total length 9·8 inches, wing 5, tail 4, tarsus 1·3, middle toe and claw 1·55.

Adult female. Differs from the female of *L. californicus* in having the crest considerably more developed, the back of the neck without white spots, the chest with dark shafts, the feathers of the breast and belly not margined with black, and the flanks chestnut. Total length 9·2 inches, wing 4·6, tail 3·9, tarsus 1·3, middle toe and claw 1·45.

A *young male* differs from the adult much in the same points mentioned for the young of *L. californicus*, but the crest is deep chestnut, and the crown of the head is washed with the same colour; there are also traces of the chestnut sides and flanks and the black patch on the belly of the adult.

Hab. Western States of N. America, ranging north to Utah, south to the State of Sonora, North Mexico, westwards to South California, and east to Arizona and Western Texas.

a–c. ♂ ♀ ad. sk.	Washington, Utah, Oct. (*H. W. H.*).	Salvin-Godman Coll.
d. ♀ ad. sk.	Toquerville, S. Utah, Oct. (*H. W. H.*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Southern Utah, Oct. (*H. W. H.*).	Salvin-Godman Coll.
f–i. ♂ ♀ ad. sk.	New Mexico (*H. W. H.*).	Salvin-Godman Coll.
k. ♀ ad. sk.	Hermosillo, Sonora, Mexico, Nov. (*Ferrari-Perez*).	Salvin-Godman Coll.
l, m. ♂ ♀ ad. sk.	Arizona (*H. W. H.*).	Salvin-Godman Coll.
n, o. ♂ ad. et juv. sk.	Camp Grant, 60 miles east of Tucson, Jan., July (*H. W. H. & Dr. Palmer*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Gila Co., Arizona, Nov. (*H. W. H.*).	Salvin-Godman Coll.
q, r. ♀ ad. sk.	Gila River, Arizona (*E. W. Nelson*).	Salvin-Godman Coll.
s, t. ♂ ♀ ad. sk.	Yuma, Arizona, May.	G. F. Morcom, Esq. [P.].
u. ♂ ad. st.	California.	Purchased of M. Vereaux.
v, w. ♀ ad. sk.	California, Feb., July.	Zool. Soc. Coll.
x–a'. ♂ ♀ ad. sk.	Agua Caliente, Cal., Jan., April (*R. B. Herron*).	Salvin-Godman Coll.
b', c'. ♂ ad. sk.	Colorado Desert, Cal., April (*F. Stephens*).	Salvin-Godman Coll.

3. Lophortyx douglasi.

Ortyx douglasii, *Vig., Douglas, Trans. Linn. Soc.* xvi. p. 145 (1828).
Ortyx elegans, *Lesson, Cent. Zool.* p. 189, pl. 61 (1830) [California !].
Ortyx spilogaster, *Vigors, P. Z. S.* 1832, p. 4 [Mexico].
Callipepla elegans, *Gould, Mon. Odontoph.* pt. i. pl. 18 (1844); *Gray, List Gallinæ Brit. Mus.* p. 78 (1867); *id. Hand-l. B.* ii. p. 273 (1870); *Finsch, Abh. nat. Ver. Brem.* 1870, p. 357 [Mazatlan]; *Ridgw. Man. N. Am. B.* p. 193 (1887).
Lophortyx elegans, *Gray, List of B.* pt. iii. *Gall.* p. 45 (1844); *Coop. Bull. Nutt. Orn. C.* ii. p. 95 (1877) [part., Mazatlan].
Callipepla douglassii, *Gambel, Journ. Ac. Philad.* (n. s.) i. p. 218 (1849) [Mazatlan].
Callipepla douglasii, *Gray, List Gallinæ Brit. Mus.* p. 78 (1867); *id. Hand-l. B.* ii. p. 273 (1870).
Callipepla elegans bensoni, *Ridgw. P. U. S. Nat. Mus.* x. p. 148 (1887) [Campos, Sonora].

Adult male. Feathers of the top and sides of the head whitish and with black shaft-stripes; crest long and pale rufous; back of the head, nape, and upper mantle with a triangular chestnut spot at the extremity of each feather; inner wing-coverts, scapulars, sides, and flanks similarly marked, but with an elongate white spot or partial margin on each web; lower mantle grey, shading into olive-brown on the wings, lower back, rump, and upper tail-coverts; primaries and

primary-coverts brown; secondaries and their coverts similar, but washed with olive on the outer web and finely mottled with buff; feathers of chin and throat black, edged with white; chest, breast, and belly grey, the two latter ornamented with round white spots; under tail-coverts dark brown down the middle, buff on the sides; tail-feathers slate-grey, washed with brown towards the tip. Total length 9·3 inches, wing 4·4, tail 3·2, tarsus 1·2, middle toe and claw 1·4.

Adult female. Differs from the male in having the general colour of the top and sides of the head and nape olive-brown; the crest usually dark brown; the mantle washed with greyish and mottled with whitish buff; the rest of the upper parts similarly marked; the inner wing-coverts, scapulars, and outer secondaries deep blackish brown, more or less mottled with rufous and margined with buff; the chin and throat white with dark shafts; and the rest of the underparts greyish brown, covered with rounded white spots.

Hab. Western Mexico: States of Sonora, Sinaloa, Jalisco.

a, b. ♂ ad. sk. et st.	Mexico.	Dr. J. E. Gray [P.].
c. ♂ ad. sk.	Mexico.	Gould Coll.
d. ♀ ad. sk.	Ysleta, Sonora, Mexico, May (*W. Lloyd*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Guadalupe, Sonora, Mexico, April (*W. L.*).	Salvin-Godman Coll.
f, g. ♀ ad. sk.*	Quiriego, Sonora, Mexico, April (*W. L.*).	Salvin-Godman Coll.
h–k. ♂ ♀ ad. sk.	Sierra de Alamos, Sonora, Mexico, May (*W. L.*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Mazatlan, Sinaloa, Mexico.	Salvin-Godman Coll.
m. ♀ ad. sk.	[Mazatlan] (*Capt. Beechey*).	Zool. Soc. Coll. (Type of *Ortyx douglasii*, Vig.)
n, o. ♂ ♀ ad. sk.	Presidio, Mexico, Dec. (*A. Forrer*).	Salvin-Godman Coll.
p–b'. ♂ ♀ ad. sk.	San Blas, Jalisco, Mexico, April, May (*W. B. Richardson*).	Salvin-Godman Coll.

53. PHILORTYX.

Type.

Philortyx, *Gould, Mon. Odontoph.* pl. 14, or pt. ii. (1846); *Introd.* p. 17 (1850) ..... P. fasciatus.

Sexes similar: crest well developed and extending much beyond the feathers of the head.

1st primary falls between the 9th and 10th; 4th slightly the longest.

Tail composed of 12 feathers, about $\frac{3}{4}$ of the length of the wing.

Tarsus shorter than the middle toe and claw.

Range. Southern Mexico: States of Colima, Guerrero, and Puebla.

* One assuming male plumage.

1. Philortyx fasciatus.

Ortyx fasciatus, *Natterer, MS., Gould, P. Z. S.* 1843, p. 133 [California!]; *Cooper, Bull. Nutt. Orn. C.* ii. p. 95 (1877) [Colima, Mexico].
Ortyx perrotiana, *Des Murs, Rev. Zool.* 1845, p. 207 [Mexico].
Philortyx fasciatus, *Gould, Mon. Odontoph.* pt. ii. pl. 14 (1846).
Philortyx personatus, *Ridgw. Auk*, iii. p. 333 (1886) [State of Puebla].
Callipela fasciata, *Ridgw. Man. N. Am. B.* p. 193 (1887).
Callipepla personatus, *Ridgw. Man. N. Am. B.* p. 193 (1887).

Adult male and female. Top and sides of the head olive-brown, washed with rufous on the crown; a well-developed occipital crest of blackish-brown, parallel-edged feathers, tipped with rufous; neck and mantle grey or olive-grey, each feather margined with reddish brown; lower back, rump, and upper tail-coverts olive-brown, margined and barred across the middle with black and buff; wing-coverts, scapulars, and outer secondaries olive-brown, barred and tipped with buff, and mostly, especially the two latter, blotched with deep brownish black towards their extremities; primaries, primary-coverts, and inner secondaries brown, the latter barred on the outer web with buff; chin and throat white; chest, sides of breast, belly, and flanks strongly barred with black and white, and fringed with reddish brown at the extremity; middle of breast and belly white, some of the feathers with a rounded or oval black spot in the middle; vent and under tail-coverts buff, the latter with heart-shaped black spots down the middle; tail-feathers grey, the middle ones washed with olive, and all with mottled cross-bars of black and pale buff. Total length 7·6 inches, wing 4, tail 2·5, tarsus 1·15, middle toe and claw 1·35.

Immature birds (in January) have the lores, superciliary stripes, and the greater part of the chin and throat black; many of the feathers of the mantle, scapulars, and wing-coverts with buff shaft-stripes, and the primaries marked on the outer web and tipped with buff.

A *very young* specimen has the top of the head covered with dark chestnut down; the lores, forehead, and superciliary stripes and cheeks rufous buff; the chin, throat, and middle of the breast yellowish white; all the rest of the body is covered with feathers; the upper parts are much like those of the adult, but the mantle is blotched with black and every feather has a wide buff shaft-stripe; the fore part of the neck, chest, and breast black, with white shaft-stripes, and the flank-feathers white, spotted on each web with black.

Hab. Same as that of the genus.

a. Ad. sk.	Mexico.	Gould Coll.
b. Ad. sk.	Mexico (*White*).	Salvin-Godman Coll.
c–l. ♂ ♀ ad. et imm. sk.	Plains of Colima, Jan. (*W. B. Richardson*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Sierra Madre del Sur, State of Guerrero, Oct. (*Mrs. H. H. Smith*).	Salvin-Godman Coll.

n, *o*. ♀ ad. et pull. sk.	Dos Arroyos, State of Guerrero, Sept., Oct. (*Mrs. H. H. Smith*).	Salvin-Godman Coll.

54. EUPSYCHORTYX.

Type.

Eupsychortyx, *Gould, Mon. Odontoph.* pl. 10, or pt. i. (1844); *Introd.* p. 15 (1850) ..... E. leucopogon.

Sexes different; crest well or fairly well-developed.

1st primary falls between the 8th and 9th; 4th slightly the longest.

Tail composed of 12 feathers, rather more than half the length of the wing.

Tarsus shorter than the middle toe and claw.

Range. Central America and the North of South America.

Key to the Species (Males)*.

A. Breast and belly not pure white.
  a. Chin and throat not black.
    a' Superciliary stripe black ..... *cristatus*, p. 407.
    b'. Superciliary stripe rufous chestnut.
      a''. Chest thickly spotted right up to the throat; ear-coverts white ..... *leucopogon*, p. 408.
      b''. Chest almost immaculate.
        a'''. Chest much longer and brownish white; ear-coverts dirty white; underparts paler ..... *sonnini*, p. 409.
        b'''. Crest shorter, dark brown: ear-coverts dark brown; underparts brighter ..... *parvicristatus*, p. 410.
  b. Chin and throat black.
    c'. Chest vinaceous with few white spots; mantle dark grey, mottled with black .. *leylandi*, p. 411.
    d'. Chest white, each feather margined with black; mantle chestnut, most of the feathers with a more or less distinct central spot. *nigrogularis*, p. 412.
B. Breast and belly pure white (chin, throat, and superciliary stripes the same colour) ..... *hypoleucus*, p. 413.

1. Eupsychortyx cristatus.

La Caille hupée du Mexique, *Briss. Orn.* i. p. 260, pl. xxv. fig. 2 (1760).

Tetrao cristatus, *Linn. S. N.* i. p. 277 (1766); *Gm. S. N.* i. pt. ii. p. 765 (1788).

Caille hupée du Mexique, *D'Aubent. Pl. Enl.* ii. pl. 51 [no. 126].

Le Zonécolin, *Buff. Hist. Nat. Ois.* ii. p. 485 (1771).

Crested Quail, *Lath. Gen. Syn.* ii. pt. ii. p. 784 (1783); *id. Gen. Hist.* viii. p. 329 (1823).

Perdix cristata, *Lath. Ind. Orn.* ii. p. 652 (1790); *Temm. Pig. et Gall.* iii. pp. 446, 736 (1815).

* It has not been found possible to make a satisfactory key for distinguishing the females.

Coturnix cristata, *Bonn. Tabl. Encycl. Méth.* i. p. 222, pl. 96. fig. 4 (1791).
Le Colin Zonécolin, *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 247 (1817).
Ortyx temminckii, *Steph. in Shaw's Gen. Zool.* xi. p. 381 (1819).
Ortyx neoxenus, *Vigors, P. Z. S.* 1830, p. 3.
Ortyx cristata, *Lesson, Ill. Zool.* text to pl. 52 (1831); *Jard. & Selb. Ill. Orn.* i. text to pl. 38.
Ortyx cristatus, *Gray, List of B.* pt. iii. *Gall.* p. 44 (1844); *id. List Gallinæ Brit. Mus.* p. 76 (1867); *id. Hand-l. B.* ii. p. 273 (1870); *v. Pelz. Ibis*, 1873, p. 36.
Eupsychortyx cristatus, *Gould, Mon. Odontoph.* pt. ii. pl. 9 (1846); *Cooper, Bull. Nutt. Orn. C.* ii. p. 95 (1877); *Berlepsch, J. f. O.* 1892, p. 98; *Hartert, Ibis*, 1893, pp. 305, 325 [Aruba, Curaçao].
Perdix neoxenus, *Aud. Orn. Biogr.* v. p. 228, pl. 423 (1849).
Eupsychortyx gouldi, *Berlepsch, J. f. O.* 1892, p. 100 [Curaçao].

Adult male. Lores, top of the head, elongate crest, chin, and throat buff or rufous buff; ear-coverts white, a wide black superciliary stripe and a black band running from the angle of the gape between the throat and ear-coverts; feathers of the back of the neck white, with a triangular black patch at the extremity; mantle, sides of the neck, and wing-coverts mostly rufous washed with grey, and shading into grey on the rump and upper tail-coverts; all the upper parts are finely mottled with black, and many of the wing-coverts, scapulars, outer secondaries, and feathers below the mantle are blotched with the same colour, while the three former are also edged with whitish buff; quills brown, the secondaries more or less mottled on the outer webs with rufous white; chest-feathers rufous down the middle, barred with black, and with a white spot on either side of the extremity; sides and flanks very similar; breast and belly white, barred with black, and, especially in the middle of the breast and belly, widely tipped with orange-buff; under tail-coverts buff with dark centres; tail-feathers brownish grey, with irregular mottled bars or vermiculations of pale buff. Total length 8 inches, wing 4, tail 2·4, tarsus 1·15, middle toe and claw 1·35.

Adult female. Differs chiefly from the male in having the superciliary stripe orange-yellow: the ear-coverts pale brown and the band below them whitish buff; the sides of the throat washed with the same colour and the feathers margined on the sides with black. Total length 8 inches, wing 3·9, tail 2·3, tarsus 1·15, middle toe and claw 1·3.

Hab. Islands of Curaçao and Aruba.

a, b. ♂ ad. st. et ♀ ad. sk.	[S. America.]	Purchased.
c. ♂ ad. sk.	[Mexico.]	Salvin-Godman Coll.

2. Eupsychortyx leucopogon.

Ortyx leucopogon, *Less. Rev. Zool.* 1842, p. 175 [San Carlos, Central America]; *Des Murs, Icon. Orn.* pl. 36 (1846).
Ortyx leucotis, *Gould, P. Z. S.* 1843, p. 133 [Santa Fé de Bogota]; *Gray, List Gallinæ Brit. Mus.* p. 77 (1867); *id. Hand-l. B.* ii. p. 273 (1870).

Eupsychortyx leucotis, *Gould, Mon. Odontoph.* pt. i. pl. 10 (1844); *Salvin, Ibis*, 1876, p. 379 [Veragua]; *Sclat. & Salv. P. Z. S.* 1879, p. 544 [Medellin, Antioquia].

Eupsychortyx leucopogon*, *Gould, Monogr. Odontoph.* pt. iii. pl. 13 (1850).

Adult male. Easily distinguished from *E. cristatus* by having the superciliary stripe and the throat right up to the ear-coverts bright orange-chestnut, so that the white ear-patch is margined above and below with chestnut instead of with black as in *E. cristatus*, but otherwise the plumage of both species is very similar. Total length 8·6 inches, wing 4·1, tail 2·7, tarsus 1·2, middle toe and claw 1·3.

Adult female differs from the male in having the feathers of the superciliary stripe and throat buff, edged with black; the ear-coverts brown; the crest dark brown instead of brownish white; the mantle blotched with black like the rest of the back, and the whole of the upper parts more coarsely marked; the underparts paler, and the black middle and cross bars much coarser and more conspicuous. Total length 7·7 inches, wing 3·9, tail 2·5, tarsus 1·15, middle toe and claw 1·3.

Hab. Veragua to the United States of Colombia.

a, b. ♂ ♀ ad. st.	Sta. Fé de Bogota, U.S.C.	Purchased.
c–g. ♂ ♀ ad. sk.	Sta. Fé de Bogota.	Gould Coll.
h. ♂ ad. sk.	Sta. Fé de Bogota.	Salvin-Godman Coll.
i. ♀ ad. sk.	Sta. Fé de Bogota (*Purdie*).	Director Roy. Gardens, Kew [P.].
k. ♂ ad. sk.	Near Bogota.	Tweeddale Coll.
l–n. ♂ ♀ ad. sk.	Antioquia, U.S.C. (*T. K. Salmon*).	Salvin-Godman & Gould Colls.
o. ♂ ad. sk.	Medellin, Antioquia.	Gould Coll.
p–r. ♂ ad. et imm. sk.	Veragua (*Arcé*).	Salvin-Godman Coll.

3. Eupsychortyx sonnini.

Coturnix fronte sordida, *Rozier, Journ. de Phys.* ii. pt. i. p. 217, pl. 2 (1772).

La Caille de Cayenne, *Virey, in Sonn. ed. Buff. Ois.* vii. p. 133 (1802).

Perdix sonnini, *Temm. Pig. et Gall.* iii. pp. 451, 737 (1815); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 246 (1817); *id. Tabl. Encycl. Méth.* i. p. 369 (1820); *Temm. Pl. Col.* v. pl. 42 [no. 75] (1823).

Le Colin Sonnini, *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 246 (1817).

Ortyx sonninii, *Steph. in Shaw's Gen. Zool.* xi. p. 383 (1819); *Lesson, Ill. Zool.* text to pl. 52 (1831); *Jard. & Selb. Ill. Orn.* i. text to

* Birds from Veragua have rather more white on the chin and upper part of the throat than is generally found in specimens from Antioquia. I have not the slightest doubt that the bird from "San Carlos in Central America" which formed the type of Lesson's *O. leucopogon* was merely a rather white-throated example of this species. The striking differences shown in Gould's plate are probably improvements on nature, and the chestnut band which commences behind the eye and crosses the ear-coverts in his figure no doubt really represents the superciliary stripe.

pl. 38; *Gray, List of B.* pt. iii. *Gall.* p. 44 (1844); *id. List Gallinæ Brit. Mus.* p. 77 (1867); *id. Hand-l. B.* ii. p. 273 (1870); *v. Pelz. Orn. Bras.* p. 290 (1871).

Sonnini's Quail, *Lath. Gen. Hist.* viii. p. 328 (1823).

Ortyx cristatus, *Cab.* (*nec Linn.*) *in Schomb. Brit. Guiana*, pt. iii. p. 747 (1848).

Eupsychortyx sonninii, *Gould, Mon. Odontoph.* pt. iii. pl. 11 (1850); *Cassin, P. Ac. Philad.* 1860, p. 378 [St. Thomas]; *Newton, Ibis*, 1860, p. 308 [St. Thomas, introduced]; *Sclat. & Salvin, P. Z. S.* 1869, p. 252 [Plain of Valencia]; *Cory, Auk*, iv. p. 225 (1887); *id. B. West Ind.* p. 224 (1889); *id. Cat. W. Ind. B.* p. 96 (1892).

Adult male. Differs chiefly from *E. leucopogon* in having the chest pale vinaceous, slightly vermiculated with black; most of the feathers with one or two small, irregular, black-edged white spots on the margins of one or both webs, but these marks are mostly hidden and do not take away much, if at all, from the general uniform appearance of the chest; the ear-coverts are dirty white. Total length 8·5 inches, wing 4·1, tail 2·6, tarsus 1·15, middle toe and claw 1·3.

Adult female. Resembles the female of *E. leucopogon*, but the black markings on the underparts are less coarse, especially on the throat; the superciliaries and cheeks are, moreover, washed with orange-rufous and much brighter, while the general colour of the underparts is paler. Total length 8·3 inches, wing 3·9, tail 2·45, tarsus 1·1, middle toe and claw 1·2.

A *quite young* bird has the upper parts very similar to those of the female adult, but all the feathers of the mantle, wing-coverts, scapulars, and chest have pale buff shaft-stripes; chin and throat white, rest of the underparts white irregularly barred with black.

Hab. N. of S. America, ranging south to the Rio Branco, east to British Guiana, and west to Caracas, Venezuela.

a. ♂ ad. sk.	Forte do Rio Branco, Brazil, Nov. (*Natterer*).	Salvin-Godman Coll.
b–g. ♂ ♀ ad. sk. et st.	British Guiana.	Schomburgk Coll.
h–o. ♂ ♀ ad. et juv. sk.	Quonga, Brit. Guiana, Sept., Oct., Nov. (*H. Whitely*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Caracas, Venezuela.	Salvin-Godman Coll.
q. ♂ ad. sk.	Mustique, Grenadine I., W.I., June (*D. W. Smith*).	Salvin-Godman Coll.
r. ♂ ad. sk.	[Mexico.]	Gould Coll.
s. ♀ ad. sk.*	No locality.	Eyton Coll.

4. Eupsychortyx parvicristatus.

Ortyx parvicristatus, *Gould, P. Z. S.* 1843, p. 106 [Santa Fé de Bogota]; *Gray, List of B.* pt. iii. *Gall.* p. 44 (1844); *id. Hand-l. B.* ii. p. 273 (1870).

Eupsychortyx parvicristatus, *Gould, Mon. Odont.* pt. ii. pl. 12 (1846).

Ortyx parvirostris, *Gray, List Gallinæ Brit. Mus.* p. 77 (1867).

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* Apparently assuming male plumage on the chest.

*Adult male.** Differs from *E. sonnini* generally in being more richly and darkly coloured; the feathers of the crest are shorter and brown; the ear-coverts are brown; the chest is pale chestnut; the breast and belly are rufous chestnut, and the white spots are much reduced in number. Total length 8·5 inches, wing 3·9, tail 2·5, tarsus 1, middle toe and claw 1·15.

Adult female. Does not differ from the female of *E. sonnini*.

Hab. United States of Colombia; vicinity of Bogota.

a–c. ♂ ad. sk.	Nr. Sta. Fé de Bogota, U.S.C. (*G. Crowther*).	Salvin-Godman Coll.
d–i. ♂ ad. sk.	Sta. Fé de Bogota.	Gould Coll.
k–m. ♂ ♀ ad. sk. et st.	Sta. Fé de Bogota.	Purchased.
n–p. ♂ ♀ ad. sk.	Sta. Fé de Bogota.	Tweeddale Coll.

5. Eupsychortyx leylandi.

Ortyx leylandi, *Moore, P. Z. S.* 1859, p. 62 [Omoa to Comayagua, Honduras]; *Sclat. & Salvin, Ibis*, 1859, p. 226; *Taylor, Ibis*, 1860, p. 312 [Comayagua, Honduras]; *Boucard, P. Z. S.* 1878, p. 42 [San José, Costa Rica]; *Nutting, P. U. S. Nat. Mus.* vi. p. 390 (1884) [Nicaragua]; *Zeledon, P. U. S. Nat. Mus.* viii. p. 112 (1886) [Costa Rica].

Eupsychortyx leucofrenatus, *Elliot, Ann. Lyc. N. York*, vii. p. 106, pl. 3 (1860) [Honduras].

Colinus leylandi, *Cherrie, Auk*, ix. p. 329 (1892) [San José, Costa Rica].

Adult male. Most nearly allied to *E. sonnini* and *E. parvicristatus*, the chest being vinaceous, indistinctly vermiculated with dusky and very sparingly spotted, but easily to be distinguished from either by having the chin and throat black; the sides of the throat and superciliary stripes buff†, wider and nearly uniform in old birds, but narrower and each feather tipped with black in younger examples; in old birds, too, the base of the throat is bounded by white feathers with black tips, in younger birds these are represented by dull rufous feathers edged with black; the upper parts are considerably darker than in either of the above-mentioned species, the black vermiculations and markings being much coarser. Total length 8·4 inches, wing 4·1, tail 2·4, tarsus 1·1, middle toe and claw 1·3.

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* The description and measurements are taken from the most richly-coloured Bogota specimens, with the breast and belly mostly chestnut; in other specimens which more nearly approach *E. sonnini* in the coloration of these parts the general size is rather larger and the tarsus is 1·2. With limited material and labels without exact particulars, it is impossible to say what the cause of this variation in size and colour may be, but the probability is that it is climatic.

† Very conspicuous in two birds from Nicaragua, much less so in two from Costa Rica; but, as another adult specimen from Nicaragua is perfectly intermediate, I do not attach much importance to these differences, and believe they are due to age and not to locality.

Younger males have the black feathers of the throat with white shafts and middles.

Adult female. To be distinguished from the females of *E. sonnini* and *E. parvicristatus*, which it greatly resembles, by having the chest like that of the male, but more spotted; the superciliary stripe wider and pure yellowish buff; the throat the same, with very slight black edges to the outer feathers; and the upper parts with the black markings coarser.

Hab. Honduras, Nicaragua, and Costa Rica.

a. ♀ ad. st.	Costa Rica (*Endrès*).	Purchased.
b, c. ♂ ♀ ad. sk.	Costa Rica (*J. Carmiol & Capt. Dow*).	Salvin-Godman Coll.
d, e. ♂ ♀ ad. sk.	Costa Rica.	Gould Coll.
f. ♂ ad. sk.	San José, Costa Rica, Feb. (*J. Carmiol*).	Salvin-Godman Coll.
g. ♂ imm. sk.	Irazu Distr., Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
h–n. ♂ ♀ ad. et imm. sk.	Chinandega, Nicaragua, May (*W. B. Richardson*).	Salvin-Godman Coll.

6. Eupsychortyx nigrogularis.

Ortyx nigrogularis, *Gould, P. Z. S.* 1842, p. 181 [Mexico]; *id. Mon. Odontoph.* pt. ii. pl. 4 (1846); *Gray, Gen. B.* iii. p. 514, pl. cxxxii. (1846); *id. List Gallinæ Brit. Mus.* p. 76 (1867); *id. Hand-l. B.* ii. p. 273 (1870); *Boucard, P. Z. S.* 1883, p. 461 [Chablé, Yucatan].

Ortyx nigrigularis, *Sclat. & Salvin, Ibis*, 1859, p. 225 [Yucatan and British Honduras].

Colinus nigrogularis, *Ridgw. Man. N. Am. B.* p. 190 (1887).

Colinus nigrogularis segoviensis, *Ridgw. P. U. S. Nat. Mus.* x. p. 593 (1887) [Segovia River, Honduras].

Adult male. Lores, superciliary stripes, chin, and throat black; top of the head and moderate crest brown, edged on the forehead and sides with white; a white stripe from the angle of the gape across the ear-coverts; feathers of the back and sides of the neck and upper part of the mantle chestnut, mostly with white centres; those of the lower mantle chestnut, margined with grey finely mottled with black; lower back, rump, and upper tail-coverts grey tipped with olive-brown, and with large deep black mottled blotches; scapulars and outer secondaries very similar, but with their inner webs margined with white; wing-coverts brown, with chestnut middles; quills brown; the inner secondaries mottled with pale brown on the outer web; chest, breast, and belly white, each feather margined all round with black, those of the sides and flanks with chestnut; under tail-coverts rufous, tipped with whitish and with black centres; tail brownish grey, the middle feathers especially more or less mottled towards the tips with whitish brown. Total length 8·2 inches, wing 4·1, tail 2·3, tarsus 1·15, middle toe and claw 1·35.

Adult female. Differs from the female of *E. sonnini* and the allied species in having the superciliary stripes and throat bright buff, without any trace of black marking. Total length 8 inches, wing 4·1, tail 2·2, tarsus 1·15, middle toe and claw 1·35.

Hab. Central America: Yucatan, British Honduras, and Honduras.

a–c. ♂ ♀ ad. sk. et st.	Honduras.	Dyson Coll.
d, e. ♂ ♀ ad. sk.	Tizimin, Yucatan, May (*G. F. Gaumer*).	Salvin-Godman and Gould Colls.
f–n. ♂ ♀ ad. sk.	Buetzotz, Yucatan, April (*G. F. G.*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Chable, N. Yucatan, Dec. (*G. F. G.*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Peto, Yucatan, April (*G. F. G.*).	Salvin-Godman Coll.
q. ♂ ad. sk.	Merida, Yucatan, June (*Dr. A. Schott*).	Salvin-Godman Coll.
r. ♂ imm. sk.	No locality.	Gould Coll.

7. Eupsychortyx hypoleucus.

Eupsychortyx hypoleucus, *Gould, P. Z. S.* 1860, p. 62 [Acajutla, Mexico.]

Eupsychortyx leucopogon, *Salvin & Sclat.* (*nec Less.*), *Ibis*, 1860, p. 277 [San Geronimo].

Ortyx hypoleucus, *Gray, List Gallinæ Brit. Mus.* p. 77 (1867); *id. Hand-l. B.* ii. p. 273 (1870).

Adult male. Differs from all the previously described species chiefly in having the superciliary stripes, chin, throat, chest, breast, and belly white; the tail-feathers also are rather distinctly barred with whitish grey, more closely than in any other species of the genus. Total length 7·8 inches, wing 4·1, tail 2·5, tarsus 1·1, middle toe and claw 1·3.

Immature males have the breast, belly, sides, and flanks much like those of the female, but more or less intermixed with the white feathers of the adult male according to age; the scapulars and outer secondaries are barred with white.

Adult female closely resembles the female of *E. cristatus*, but the feathers of the crest are darker. Total length 7·5 inches, wing 4·1, tail 2·5, tarsus 1·1, middle toe and claw 1·25.

Hab. Central America; Guatemala.

a, b. ♀ ad. sk.	Guatemala.	Salvin-Godman Coll.
c. ♂ imm. sk.	Vera Paz, Guatemala.	Salvin-Godman Coll.
d–f. ♂ ♀ ad. et ♂ imm. sk.	San Geronimo, Vera Paz, Guatemala, Aug., Nov. (*O. S.*).	Salvin-Godman Coll.
g. ♂ ad. sk.	No locality.	Purchased of M. Verreaux.

55. ORTYX.*

	Type.
Ortyx, *Steph. in Shaw's Gen. Zool.* xi. p. 376 (1819); *Gould, Monogr. Odontoph., Introd.* p. 13 (1850)..	O. virginianus.
Colinus, *Less. Man. d'Orn.* ii. p. 190 (1828).....	O. virginianus.
Ortygia, *Boie, Isis*, 1828, p. 326.....	O. virginianus.
Colinia, *Nutt. Man. Orn.* i. p. 646 (1832)	O. virginianus.

Sexes different; no distinct crest.

1st primary falls between the 7th and 8th; 4th slightly the longest.

Tail composed of 12 feathers, rather more than half the length of the wing.

Tarsus shorter than the middle toe and claw.

Range. United States of North America, Mexico, and Cuba.

Key to the Species (Males)†.

I. Chin and throat white, surrounded by a black band.
  A. Feathers of the middle of the breast and belly whitish or whitish buff, with V-shaped black bars.
    a. Feathers of the mantle vinaceous rufous, the edges grey barred with black.
      a'. Bars on the breast narrower and less marked ..... *virginianus*, p. 415.
      b'. Bars on the breast wider and more conspicuous ..... *floridanus*, p. 418.
    b. Feathers of the mantle barred and mottled with pale rufous and black, and edged indistinctly with grey..... *texanus*, p. 419.
  B. Feathers of the middle of the breast and belly chestnut, irregularly edged and spotted with white on the sides..... *cubanensis*, p. 421.
  C. Feathers of the middle of the breast and belly dull reddish chestnut.
    c. Black band below the throat wider and extending over the upper part of the chest..... *pectoralis*, p. 421.
    d. Black band narrower, not extending on to the chest ..... *graysoni*, p. 422.
II. Chin and throat black.
  D. Middle of breast and belly uniform chestnut or dull brick-colour.
    e. Chin and throat black, chest dull brick-colour ..... *ridgwayi*, p. 422.

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* Doubtful species:—
Ortyx affinis, *Vigors, P. Z. S.* 1830, p. 3; *Reinhardt, Ibis*, 1861, p. 115 (Virgin Islands).

† It has not been found possible to make any satisfactory key to the females.

f. Chin, throat, and chest black.
c'. Feathers of the top of the head black, edged and tipped with brown, a white superciliary stripe usually fairly developed ..... *coyolcos*, p. 423.
d'. Feathers of the top of the head uniform black, superciliary stripe black ..... *atriceps*, p. 424.
E. Middle of breast and belly white, barred with black and mixed with chestnut .... *castaneus*, p. 424.

1. Ortyx virginianus.

New-England Partridge, *Albin, Nat. Hist. B.* i. p. 26, pl. xxviii. (1738).
American Partridge, *Catesby, Carol.* ii. App. pl. 12 (1743); *Nutt. Man. Orn.* i. p. 647 (1832).
La Perdrix de la Nouvelle Angleterre, *Briss. Orn.* i. p. 229 (1760); *Buff. Hist. Nat. Ois.* ii. p. 447 (1771).
La Caille de la Louiziane, *Briss. Orn.* i. p. 258, pl. xxii. fig. 2 (1760); *D'Aubent. Pl. Enl.* ii. pl. 53 [no. 149].
La Perdrix d'Amérique, *Briss. Orn.* i. p. 230 (1760).
Tetrao virginianus, *Linn. S. N.* i. p. 277 (1766); *Gm. S. N.* i. pt. ii. p. 761 (1788).
Tetrao marilandicus, *Linn. S. N.* i. p. 277 (1766).
Tetrao mexicanus, *Linn. S. N.* i. p. 277 (1766); *Gm. S. N.* i. pt. ii. p. 762 (1788).
Le Colenicui, *Buff. Hist. Nat. Ois.* ii. p. 487 (1771).
Virginia Partridge, *Lath. Gen. Syn.* ii. pt. ii. p. 777 (1783).
Maryland Partridge, *Lath. Gen. Syn.* ii. pt. ii. p. 778 (1783); *id. Gen. Hist. B.* viii. p. 324 (1823).
Louisiana Quail, *Lath. Gen. Syn.* ii. pt. ii. p. 785 (1783); *id. Gen. Hist.* viii. p. 326 (1823).
Tetrao marilandus, *Gm. S. N.* i. pt. ii. p. 761 (1788).
Perdix virginiana, *Lath. Ind. Orn.* ii. p. 650 (1790); *Wils. Am. Orn.* vi. p. 21, pl. xlvii. (1812); *Jard. ed. Wils. Am. Orn.* ii. p. 223, pl. 47. fig. 2 (1832); *Aud. Orn. Biogr.* i. p. 388, pl. 76 (1831), v. p. 564 (1839).
Perdix marilanda, *Lath. Ind. Orn.* ii. p. 651 (1790).
Perdix mexicana, *Lath. Ind. Orn.* ii. p. 653 (1790).
Tetrao minor, *Bartr. Travels*, p. 290 *bis* (1791).
Coturnix virginiana, p. 219, marilandica, p. 220, mexicana, p. 223, *Bonn. Tabl. Encycl. Méth.* i. (1791).
Perdix borealis, *Temm. Pig. et Gall.* iii. pp. 436, 735 (1815) [part.]; *Vieill. Gal. Ois.* ii. p. 44, pl. 214 (1825).
Le Colin ho-oui. *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 242 (1817).
Ortyx borealis, *Steph. in Shaw's Gen. Zool.* xi. p. 377 (1819); *Jard. & Selb. Ill. Orn.* i. text to pl. 38.
Ortyx virginianus, *Jard. Nat. Lib., Orn.* iv. p. 123, pl. x. (1834); *Gould, Monogr. Odontoph.* pt. i. pl. i. (1844); *Woodh. Sitgr. Rep.* p. 94 (1853) [Indian Territory; Texas]; *Newton, Ibis*, 1859, p. 254 [St. Croix, introduced]; *Baird, U. S. & Mex. Surv., Birds*, p. 32 (1859); *Baird, B. N. Amer.* p. 640 (1860); *Sclat. P. Z. S.* 1861, p. 80 [Jamaica, introduced]; *Albrecht, J. f. O.* 1862, p. 205 [Jamaica]; *Hayd. Rep.* p. 173 (1862) [Missouri R. to White R.]; *Marsh, P. Ac. Philad.* 1863, p. 303 [Jamaica]; *Gray, List Gallinæ Brit. Mus.* p. 75 (1867); *id. Hand-l. B.* ii. p. 272 (1870);

Trippe, P. Essex Inst. vi. p. 118 (1871) [Minnesota]; *id. P. Bost. Soc.* xv. p. 240 (1872) [Iowa]; *Allen, Bull. Mus. C. Z.* ii. p. 352 (1871), iii. p. 181 (1872); *Coues, Key N. Am. B.* p. 237 (1872); *id. B. N.-West*, p. 431 (1874); *Snow, B. Kansas*, ed. 3, p. 11 (1875); *Brown, Bull. Nutt. Orn. C.* iv. p. 12 (1879) [Alabama]; *Scott, Bull. Nutt. Orn. C.* iv. p. 147 (1879) [W. Missouri]; *Loomis, Bull. Nutt. Orn. C.* iv. p. 217 (1879) [S. Carolina]; *Lawrence, P. U. S. Nat. Mus.* i. pp. 237, 487 (1879) [Antigua, introduced], p. 450 [Guadelupe, Martinique]; *Cory, B. Bahama Is.* p. 142 (1880); *Dalgleish, Bull. Nutt. Orn. C.* v. p. 144 (1880) [England, introduced]; *A. E. Newton, Handb. Jamaica*, p. 117 (1881); *Cory, Bull. Nutt. Orn. C.* vi. p. 154 (1881) [Haiti, introduced]; *Beckham, Bull. Nutt. Orn. C.* vii. p. 165 (1882) [Louisiana]; *Allen, Ibis*, 1883, p. 226; *Samuels, N. & E. Birds*, p. 389 (1883); *Cory, Birds Haiti & San Domingo*, p. 138 (1885); *Brewst. Auk*, iii. p. 103 (1886) [N. Carolina]; *Langdon, Auk*, iv. p. 129 (1887) [Tennessee]; *Evermann, Auk*, v. p. 349 (1888) [Carroll Co., Indiana]; *Richmond, Auk*, v. p. 20 (1888) [Dist. of Columbia]; *Feilden, Ibis*, 1889, p. 410 [Barbadoes].

Ortyx virginiana, *Aud. B. Amer.* v. p. 59, pl. 289 (1842); *De Kay, Zool. N. York.* p. 202, pl. 75 (1844); *Max. J. f. O.* 1858, p. 443; *Fowler, Am. Nat.* iii. p. 535 (1869) [habits]; *Ridgw. Bull. Nutt. Orn. C.* vii. p. 22 (1882) [Knox Co., Indiana]; *Hay, Bull. Nutt. Orn. C.* vii. p. 93 (1882) [Lower Mississippi]; *Bailey, Bull. Nutt. Orn. C.* viii. p. 41 (1893) [Georgia]; *Stearns & Coues, N. England Birds*, pt. ii. p. 157 (1883); *Coues, Key N. Am. B.* p. 589 (1884); *Agersborg, Auk*, ii. p. 285 (1885) [S.E. Dakota]; *Wilcox, Auk*, ii. p. 315 (1885) [Idaho, introduced].

Ortyx marylandus, *Denny, P. Z. S.* 1847, p. 38 [Cuba, Jamaica].

Ortyx virginianus, var. virginianus, *Baird, Brew., & Ridgw. N. Am. B.* iii. p. 468 (1874).

Colinus virginianus, *Stejn. Auk*, ii. p. 45 (1885); *Cory, List B. West Ind.* p. 24 (1885); *Fox, Auk*, iii. p. 319 (1886) [Roane Co., Tennessee]; *A. O. U. Check-list*, p. 167 (1886), *Cory, Auk*, iv. p. 224 (1887) [Bahamas, Haiti, San Domingo, Jamaica, St. Croix, Antigua]; *Ridgw. N. Am. B.* p. 188 (1887); *Cory, B. West Ind.* p. 223 (1889); *Rives, Auk*, vi. p. 53 (1889) [White Top Mountain, Virginia]; *Faxon, Auk*, vi. p. 99, footnote (1889) [Saddle-Back range, Mass.]; *Pindar, Auk*, vi. p. 313 (1889) [Fulton Co., Kentucky]; *Belding, Occas. Pap. Cal. Acad. Sci.* ii. p. 8 (1890); *Loomis, Auk*, vii. p. 35 (1890) [Pickens Co., S. Carolina], viii. p. 326 (1891) [S. Carolina]; *Cory, Cat. W. Ind. B.* p. 96 (1892) [Bahamas, Greater and Lesser Antilles]; *Bendire, N. Am. B.* p. 1, pl. i. fig. 1 (1892); *Scott, Auk*, ix. p. 120 (1892) [Jamaica, introduced]; *Coombs, Auk*, ix. p. 204 (1892) [Louisiana]; *Todd, Auk*, x. p. 38 (1893) [Indiana and Pennsylvania].

Adult male. Lores whitish, shading into pale buff on the superciliary stripes: forehead black; feathers of the top of the head black, widely tipped with rufous chestnut; back and sides of neck mostly white, with a triangular chestnut patch at the extremity, edged on the sides with black; mantle vinaceous rufous, shading into grey towards the sides of the feathers, which are more or less distinctly barred with black; lower back, rump, and upper tail-coverts olive-grey, finely mottled with dusky and buff; most of the feathers down

the middle of the lower back blotched with black and mottled with rufous at the extremity, and the rump-feathers and upper tail-coverts with a black subterminal shaft-spot; the inner wing-coverts, scapulars, and outer secondaries rufous, shading into grey on the outer web, which is indistinctly barred with white; a black subterminal blotch and black vermiculations towards the extremity, which together with the inner web is margined with buff; the rest of the wing-coverts rufous, irregularly barred with black on the edges; quills greyish brown, the inner secondaries edged and irregularly barred along the margin with rufous buff; a black band across the cheek from the gape to the ear-coverts, which are chestnut; chin and throat white, terminated by a wide black band which extends across the throat between the ear-coverts; upper chest vinaceous rufous like the mantle, shading into whitish buff or buff on the lower chest and breast and into white on the belly, all these parts are somewhat irregularly barred with rather narrow wide-set black bands; sides and flanks chestnut in the middle, and white irregularly barred with black along the margin, the last black bar on each side of the extremity is usually more or less crescent-shaped, producing an ocellated appearance; under tail-coverts pale rufous tipped with buff, each with a subterminal arrow-shaped black mark on the shaft; tail-feathers slate-grey, mottled towards the extremity with greyish. Total length 8·6 inches, wing 4·5, tail 2·5, tarsus 1·2, middle toe and claw 1·45.

Adult female. Differs chiefly from the male in having the throat bright buff; the black bands from the gape to the ear-coverts and across the front of the neck represented only by black tips to the feathers; the black bands on the underparts are much less distinct and usually absent on the middle of the breast and belly. Total length 8·6 inches, wing 4·5, tail 2·5, tarsus 1·2, middle toe and claw 1·4.

A *chick* has the lores, forehead, and sides of the head covered with buff-coloured down, the top of the head with brownish rufous, and the chin and throat with white; the ear-coverts brownish black; general colour of the upper parts browner than in the adult and all the feathers with pale shaft-stripes; the rest of the underparts brownish white, also with pale shafts and a whitish-buff spot on the extremity of each feather.

Hab. Eastern United States of North America; ranging north to Massachusetts and Minnesota, west to Dakota and Indian Territory, Texas, and south to Georgia and other Gulf States. Also introduced into many of the West Indian Islands and various parts of the Old World.

a. ♂ ad. st.	N. America.	Hardwicke Bequest.
b, c. ♂ ♀ ad. sk.	N. America, May, July (*H. W. Henshaw*).	Salvin-Godman Coll.
d. ♀ ad. sk.	Vermilion, Dakota, Jan. (*W. Brewster*).	Salvin-Godman Coll.
e, f. ♂ ad. sk.	Mt. Carmel, Illinois, July, Aug. (*E. W. Nelson*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Chicago, Dec. (*E. L. Dayan*).	Salvin-Godman Coll.

h. ♀ ad. sk.	Michigan.	Prof. Steere [P.].
i, *k*. ♂ ♀ ad. sk. et st.	Rockport, Indiana.	Prof. J. P. Kirtland [P.].
l. ♀ ad. sk.	New York.	Tweeddale Coll.
m, *n*. ♂ ♀ ad. sk.	Sing Sing, New York, Nov. (*A. K. Fisher*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Albany, New York (*J. H. Hurst*).	Tweeddale Coll.
p. ♂ ad. sk.	Marston's Mills, Massachusetts, Dec. (*W. Brewster*).	Salvin-Godman Coll.
q–*u*. ♂ ♀ ad. sk.	New Haven, Connecticut, Dec. (*A. J. Dayan*).	Salvin-Godman Coll.
v, *w*. ♂ ♀ ad. sk.	New Jersey.	Salvin-Godman Coll.
x–*g'*. ♂ ♀ ad. et pull sk.	Washington D.C., Sept., Nov. (*H. W. H.*).	Salvin-Godman Coll.
h'. ♀ ad. sk.	Aiken, S. Carolina, March (*C. H. Merriam*).	Salvin-Godman Coll.
i'–*l'*. ♂ ad. sk.	Falle Church, Virginia, Nov., Dec. (*H. W. H.*).	Salvin-Godman Coll.
m'–*p'*. ♀ ad. sk.	Fairfax Co., Va., Dec. (*H. W. H.*).	Salvin-Godman Coll.
q'–*s'*. ♂ ♀ ad. sk.	Hollister's, Va., Nov. (*H. W. H.*).	Salvin-Godman Coll.
t'. ♂ ad. sk.	Quantico, Va., March (*H. W. H.*).	Salvin-Godman Coll.
u', *v'*. ♂ ♀ ad. sk.	Bermuda, Dec.	Capt. S.G. Reid [C.].
w', *x'*. ♂ ad. sk. et ♀ ad. st.	Jamaica.	P. H. Gosse, Esq. [C.].
y'. ♂ ad. sk.	[Orizaba, Vera Cruz, Mexico.]	Tweeddale Coll.

Subsp. *a*. **Ortyx floridanus.**

Ortyx virginianus, var. floridanus, *Coues, Key N. A. B.* p. 237 (1872); *Baird, Brew., & Ridgw. N. Amer. B.* iii. p. 522 (1874) [Miami, Fla.].

Ortyx virginiana floridana, *Coues, Key N. Am. B.* p. 591 (1884).

Colinus virginianus floridanus, *Stejn. Auk*, ii. p. 45 (1885): *A. O. U. Check-list*, p. 167 (1886); *Ridgw. Man. N. Am. B.* p. 188 (1887); *Chapman, Auk*, v. p. 270 (1888) [Gainesville, Fla.]; *Scott, Auk*, vi. p. 245 (1889) [Miami, and Tarpon Springs, Fla.]; *id. Auk*, ix. p. 212 (1892) [Caloosahatchie region, Fla.]; *Bendire, N. Am. B.* p. 7 (1892).

Adult male. Differs chiefly from the male of *O. virginianus* in having the general tone of the plumage darker, the top of the head much blacker, and the black markings on the rest of the upper parts coarser and more marked; the buff edges of the outer secondaries and scapulars much narrower; the ear-coverts black, and the band from the gape passing uninterruptedly across them round the base of the throat, where it usually widens out considerably, often extending over the upper chest and generally taking the place of the vinaceous rufous which predominates in *O. virginianus*. The black bands on the rest of the underparts are much coarser and more strongly marked. Total length 8·6 inches, wing 4·3, tail 2·3, tarsus 1·2, middle toe and claw 1·35.

Adult female. Differs from the female of *O. virginianus* in being generally darker and having the buff edging of the outer secondaries and scapulars much narrower and the black markings on the breast and underparts much more strongly marked and equally developed on the feathers of the middle of the breast and belly. Total length 8·6 inches, wing 4·3, tail 2·3, tarsus 1·15, middle toe and claw 1·3.

The *chick* in July resembles the chick of *O. virginianus* described above.

Quite young birds (both male and female) in August resemble the above, but the top and sides of the head are covered with greyish-brown feathers, and on the mantle, wing-coverts, and sides of breast and belly the adult feathers begin to make their appearance.

Hab. Florida, U.S. of N. America.

a–c. ♂ ♀ ad. sk.	Florida.	W. Dismore, Esq. [P.].
d. ♂ ad. sk.	Florida, Feb. (*B. H. Warren*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Hawkinsville, Fla., March (*B. H. W.*)	Salvin-Godman Coll.
f, g. ♀ ad. sk.	Orange Co., Fla., April (*B. H. W.*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Dreggor Settlement, Fla., April (*B. H. W.*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Okahumkee, Fla., April (*C. H. Merriam*).	Salvin-Godman Coll.
k–q''. ♂ ♀ ad., imm., juv. et pull. sk.	Tarpon Springs, Fla., Jan.–March, June–Aug., Oct., Dec. (*W. E. D. Scott and W. S. Dickinson*).	Salvin-Godman Coll.
h''. ♂ imm. sk.	Melbourne, Fla., Sept. (*W. Hovie*).	Salvin-Godman Coll.
i''. ♂ juv. sk.	St. Lucie, Fla., Oct. (*W. H.*).	Salvin-Godman Coll.
k'', l''. ♂ ♀ ad. sk.	Fort Drum, Fla., Oct. (*W. H.*).	Salvin-Godman Coll.
m''. ♀ ad. sk.	Miami, Fla., April (*H. W. Henshaw*).	Salvin-Godman Coll.

Subsp. *b.* Ortyx texanus.

Ortyx virginianus, *McCall* (*nec Linn.*), *P. Ac. Philad.* v. p. 220 (1851) [N. Mexico, S.W. Texas]; *Nehrling, Bull. Nutt. Orn. C.* vii. p. 175 (1882) [S. Texas].

Ortyx texanus, *Lawrence, Ann. Lyc. N. York*, vi. p. 1 (1853); *Baird, U.S. & Mex. Surv., Birds*, p. 22 (1859) [W. Texas]; *id. B. N. Amer.* p. 641, pl. xxiv. (1860); *Dresser, Ibis*, 1865, pp. 315, 317, 1866, p. 27 [S. Texas]; *Gray, List Gallinæ Brit. Mus.* p. 75 (1867); *id. Hand-l. B.* ii. p. 272 (1870).

Ortyx virginianus, var. texanus, *Coues, Key N. A. B.* p. 237 (1872).

Colinus virginianus texanus, *Baird, Brew., & Ridgw. B. N. Amer.* iii. p. 474 (1874); *Stejn. Auk*, ii. p. 45 (1885); *A. O. U. Check-list*, p. 167 (1886); *Ridgw. Man. N. Am. B.* p. 188 (1887); *Lloyd, Auk*, iv. p. 186 (1887) [W. Texas]; *Beckham, P. U.S. Nat. Mus.* x. pp. 636, 640, 655 (1887) [S.W. Texas]; *Hasbrouck, Auk*, vi. p. 237 (1889) [Eastland Co., Texas]; *Attwater, Auk*, ix. p. 233 (1892) [San Antonio, Texas]; *Bendire, N. Am. B.* p. 8 (1892).

Ortyx virginiana texana, *Sennett, Bull. U.S. Geol. Surv.* iv. p. 53 (1878) [Rio Grande, Texas]; *Brown, Bull. Nutt. Orn. C.* vii. p. 41 (1882) [S.W. Texas]; *Coues, Key N. Am. B.* p. 591 (1884).

Adult male. Differs from *O. floridanus* in having the upper parts much paler and greyer, and the vinaceous chestnut markings of the latter replaced by pale vinaceous. It resembles *O. virginianus* in having the black band round the base of the throat narrower, and *O. floridanus* in having the black bars on the chest and breast coarser and more marked. Two specimens, which apparently represent only an individual variety, have a large black patch covering the chin and middle of the throat; but, otherwise, their plumage is perfectly similar to the above. Total length 8·6 inches, wing 4·3, tail 2·4, tarsus 1·2, middle toe and claw 1·35.

Adult female. Resembles the female of *O. floridanus*, but the general colour of the upper parts is greyer and paler, and the vinaceous chestnut markings are replaced by pale vinaceous. Total length 8·4 inches, wing 4·2, tail 2·2, tarsus 1·15, middle toe and claw 1·3.

Hab. Southern and Western Texas, U.S. of N. America, and North-east and Western Mexico.

a, b. ♀ ad. sk.	Santana, near Guadalajara, Jalisco, Mexico, March (*W. Lloyd*).	Salvin-Godman Coll.
c, d. ♂ ♀ ad. sk.	N.E. Mexico.	Gould Coll.
e, f. ♂ ♀ ad. sk.	Xicotencal, Tamaulipas, Mexico, May (*W. B. Richardson*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Soto la Marina, Tamaulipas, Mexico, April (*W. B. R.*).	Salvin-Godman Coll.
h–l. ♂ ♀ ad. sk.	Sierra Madre, above Ciudad Victoria, Tamaulipas, Mexico (*W. B. R.*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Hacienda de las Escobas, Nuevo Leon, Mexico, May (*F. B. Armstrong*).	Salvin-Godman Coll.
n, o. ♂ ♀ ad. sk.	San Agustin, Nuevo Leon, Mexico, May (*F. B. A.*).	Salvin-Godman Coll.
p. ♀ ad. sk.	San Pedro, Nuevo Leon, Mexico, May (*F. B. A.*).	Salvin-Godman Coll.
q. ♀ ad. sk.	Vaqueria, Nuevo Leon, Mexico, May (*F. B. A.*).	Salvin-Godman Coll.
r, s. ♂ ad. sk.	Estancia, Monterey, Nuevo Leon, Mexico, April (*F. B. A.*).	Salvin-Godman Coll.
t, u. ♂ ♀ ad. sk.	Topo Chico, Monterey, Nuevo Leon, Mexico, March (*F. B. A.*).	Salvin-Godman Coll.
v, w. ♂ ♀ ad. sk. et st.	Texas.	Gould Coll.
x, y. ♂ ♀ ad. sk.	Texas (*Heermann*).	Salvin-Godman Coll.
z. ♂ ad. sk. [var.].	Brownsville, Texas, June (*F. B. A.*).	Salvin-Godman Coll.

a'–k'. ♂ ♀ ad. sk.	Corpus Christi, Texas, March, Oct.–Dec. (*F. B. A.*).	Salvin-Godman Coll.
l', m'. ♂ ♀ ad. sk.	Medina, Texas, Dec. (*H. E. Dresser*).	Salvin-Godman Coll.
n'. ♂ ad. sk. [var.].	San Antonio, Texas, Dec. (*H. E. D.*).	Salvin-Godman Coll.
o'. ♂ ad. sk. [pale var.].	Papalote, Bee Co., Texas, Feb. (*F. B. A.*).	Salvin-Godman Coll.

2. Ortyx cubanensis.

Ortyx virginianus, *D'Orb. (nec Lath.) in Ramon de la Sagra's Hist. Cuba*, p. 182 (1839); *Sundev. Œfv. Vet.-Ak. Förh.* 1869, p. 601.

Ortyx cubanensis, *Gould in Gray, Gen. B.* iii. p. 514 (1846); *id. Monogr. Odontoph.* pt. iii. pl. 2 (1850); *Gundlach, J. f. O.* 1856, p. 337; *Brewst. P. Bost. Soc. N. H.* vii. p. 307 (1860); *Albrecht, J. f. O.* 1861, p. 213; *Gundlach, Rep. Fis. Nat. Cuba*, i. p. 303 (1866); *Gray, List Gallinæ Brit. Mus.* p. 75 (1867); *id. Hand-l. B.* ii. p. 273 (1870); *Gundlach, J. f. O.* 1874, p. 300, 1875, p. 293, 1878, p. 161 [Porto Rico]; *id. Anal. Soc. Esp. Hist. N.* vii. p. 350 (1878).

Ortyx cubensis, *Sclat. & Salvin, Nom. Av. Neotr.* p. 137 (1873).

Ortyx virginianus, var. cubanensis, *Baird, Brew., & Ridgw.* iii. p. 468 (1874).

Colinus cubanensis, *Cory, List B. West Ind.* p. 24 (1885); *id. Auk*, iv. p. 223 (1887); *id. B. West Ind.* p. 222 (1889); *id. Cat. W. Ind. B.* p. 96 (1892) [Isle of Pines].

Colinus virginianus cubanensis, *Ridgw. Man. N. Am. B.* p. 188 (1887); *Chapman, Auk*, v. p. 395 (1888); *Scott, Auk*, vi. p. 245 (1889) [Key West, Fla.]; *Bendire, N. Am. B.* p. 9 (1892).

Adult male. Most nearly resembles *O. texanus*, but the top of the head is quite black and the feathers of the chest are mostly black mixed with dull rufous or white in the middle; those of the breast and belly, as well as the sides and flanks, have the ground-colour rufous, more or less edged with black on the sides and irregularly spotted with white. Total length 8 inches, wing 4·2, tail 2·3, tarsus 1·2, middle toe and claw 1·4.

Adult female is coarsely spotted on the underparts with black, dirty white, and rufous.

Hab. Island of Cuba.

a. ♂ ad. sk.	Cuba.	Salvin-Godman Coll.
b, c. ♂ ad. sk.	Cuba.	Gould Coll.
d. ♂ imm. sk. [var.].	Cuba.	Zool. Soc. Coll.

3. Ortyx pectoralis.

Ortyx pectoralis, *Gould, P. Z. S.* 1842, p. 182 [Mexico]; *id. Monogr. Odontoph.* pt. iii. pl. v. (1850); *Gray, List Gallinæ Brit. Mus.* p. 76 (1867); *id. Hand-l. B.* ii. p. 273 (1870).

Colinus pectoralis, *Ridgw. Man. N. Am. B.* p. 189 (1887).

Adult male. General colour of the upper parts very similar to that of *O. texanus*, but in the most adult example the top of the

head is entirely black; otherwise the markings of the head, chin, and throat are very similar. The upper chest is black, most of the feathers with a white bar across the basal half; the rest of the underparts are uniform pale rufous chestnut. Total length 7·7 inches, wing 4, tail 2·1, tarsus 1·1, middle toe and claw 1·25.

In a specimen which appears to be a younger bird the black feathers of the chest are devoid of white cross-bars, and the thighs and under tail-coverts are similar to those of the adult female.

Adult female. Very similar to the female of *O. texanus*, but the general colour of the upper parts is darker and browner and the black markings on the underparts are heavier. Total length 7·6 inches, wing 4, tail 2·1, tarsus 1·1, middle toe and claw 1·25.

Hab. Vera Cruz, Eastern Mexico.

a. ♂ nr. ad. sk.	Mexico.	Purchased of M. Verreaux.
b, *c*. ♀ ad. sk.	Mexico.	Gould Coll.
d. ♂ ad. sk.	Jalapa, Vera Cruz, Mexico (*de Oca*).	Salvin-Godman Coll.

4. Ortyx graysoni.

Ortyx graysoni, *Lawrence*, *Ann. Lyc. N. York*, viii. p. 476 (1867) [Guadalaxara, W. Mexico].

Colinus graysoni, *Stejn. Auk*, ii. p. 45 (1885); *A. O. U. Check-list*, p. 168 (1886); *Ridgw. Man. N. Am. B.* p. 189 (1887).

Adult male. Differs chiefly from the male of *O. pectoralis* in having the black round the base of the throat reduced to a band and not extending over the upper chest, which is dull rufous chestnut like the rest of the underparts. Total length 7·8 inches, wing 4·5, tail 2·5, tarsus 1·2, middle toe and claw 1·4.

In *younger males* the feathers of the top of the head are irregularly edged with whitish or buff; the wings and back are more coarsely barred with white, and the feathers of the thighs are spotted at the extremity of each web with white edged internally with black. Total length 7·7 inches, wing 4·3, tail 2·3, tarsus 1·15, middle toe and claw 1·3.

The *female* resembles that of *O. pectoralis*, but is somewhat larger.

Hab. State of Jalisco, W. Mexico.

a. ♂ nr. ad. sk.	Santana, near Guadalajara, Jalisco, Mexico (*W. Lloyd*).	Salvin-Godman Coll.
b, *c*. ♂ ad. sk. et nr. ad. sk.	Lake Chapala, Jalisco, Mexico, Aug. (*W. B. Richardson*).	Salvin-Godman Coll.
d. ♀ ad. sk.	Mexico.	Purchased of M. Verreaux.

5. Ortyx ridgwayi.

? Ortyx graysoni, *Stephens* (*nec Lawr.*), *Auk*, ii. p. 227 (1885) [Tucson, Arizona].

Colinus ridgwayi, *Brewst. Auk*, ii. p. 199 (1885) [S. of Sasabe, Sonora, Mexico]; *Stephens*, *Auk*, ii. p. 228 (1885); *Brown*, *Forest*

and Stream, xxv. no. 25, Dec. 31, 1885, p. 445; *Allen, Bull. Am. Mus. Nat. Hist.* i. p. 273, pl. xxiii. (1886); *id. Auk*, iii. p. 275 (1886); *Morcom, Auk*, iii. p. 287 (1886); *Scott, Auk*, iii. p. 387 (1886) [Arizona]; *A. O. U. Check-list*, p. 168 (1886); *Allen, Auk*, iii. p. 483 (1886), iv. p. 74 (1887) [Barboquivari Mts., Arizona]; *Ridgw. Man. N. Am. B.* p. 189 (1887); *Brewst. Auk*, iv. p. 159 (1887) [Sonora, N. Mexico]; *Allen, Auk*, vi. p. 189 (1889) [Tubal, Arizona]; *Bendire, N. Amer. B.* p. 10 (1892).

Adult male. Differs from the adult male of *O. graysoni* in having the lores, superciliary stripes, chin, and throat black. From *O. coyolcos* and *O. atriceps* it is at once distinguished by having the black confined to the chin and throat and not extending over the pale reddish brick-coloured chest and underparts. Total length 8·4 inches, wing 4·5, tail 2·5, tarsus 1·2, middle toe and claw 1·35.

Adult female. Closely resembles the adult female of *O. coyolcos*, but is larger. Total length 8·4 inches, wing 4·5, tail 2·5, tarsus 1·2, middle toe and claw 1·35.

Hab. Arizona, U.S. of America, and Sonora, N. Mexico.

a. ♂ ad. sk.	South of Sasabe, Sonora, Mexico, Aug. (*F. Stephens*).	G. F. Morcom, Esq. [P.]. (Type of species.)
b, c. ♂ ♀ ad. sk.	Barboquivari Mts., Arizona (*Brown*).	Salvin-Godman Coll.

6. Ortyx coyolcos.

La Caille du Mexique, *Briss. Orn.* i. p. 256 (1760).
Le Coyolcos, *Buff. Hist. Nat. Ois.* ii. p. 486 (1771).
Tetrao coyolcos, *Müll. S. N. Suppl.* p. 129 (1776); *Gm. S. N.* i. pt. ii. p. 763 (1788).
Lesser Mexican Quail, *Lath. Gen. Syn.* ii. pt. ii. p. 786 (1783); *id. Gen. Hist.* viii. p. 327 (1823).
Perdix coyolcos, *Lath. Ind. Orn.* ii. p. 653 (1790); *Bonn. Tabl. Encycl. Méth.* i. p. 215 (1791).
Le Colin Coyolcos, *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 241 (1817).
Ortyx nigrogularis, *Gray* (*nec Gould*), *List of B.* pt. iii. *Gall.* p. 44 (1844)
Ortyx coyolcos, *Gould, Monogr. Odontoph.* pt. iii. pl. 6, right-hand fig. (1850); *Gray, List Gallinæ Brit. Mus.* p. 76 (1867); *id. Hand-l. B.* ii. p. 273 (1870).
Colinus coyolcos, *Ridgw. Man. N. Am. B.* p. 189 (1887).

Adult male. Resembles *O. pectoralis* and *O. graysoni*, but the chin, throat, and lores are entirely black, and the white superciliary stripe is almost or entirely absent in the most adult examples. It must be noted that most specimens have a certain amount of white on the basal part of the feathers of the throat; this is apparently a sign of immaturity, as there is no trace of white in what appear to be the most adult examples from the same locality. The feathers of the top of the head are black in the middle and rather widely tipped and edged with sandy or rufous brown. Total length 7·7 inches, wing 4·2, tail 2·3; tarsus 1·15, middle toe and claw 1·4.

Adult female. Closely resembles the females of *O. pectoralis* and

O. graysoni. Total length 7·7 inches, wing 4·2, tail 2·3, tarsus 1·1, middle toe and claw 1·3,

Hab. Oaxaca, S. Mexico.

a. ♂ ad. sk.	Mexico.	Purchased.
b–f. ♂ ♀ ad. et vix ad. sk.	Juchitan, Tehuantepec, Feb., April, & Aug. (*F. Sumichrast*).	Salvin-Godman, Tweeddale, and Gould Colls.
g–k. ♂ ♀ ad. et vix ad. sk.	Tehuantepec, Feb. (*W. B. Richardson*).	Salvin-Godman Coll.

7. Ortyx atriceps.

Ortyx coyolcos, *Gould* (*nec Müll.*), *Monogr. Odontoph.* pt. iii. pl. 6, left-hand fig. (1850).

Adult male. Differs chiefly from the male of *O. coyolcos* in having the top of the head, superciliary stripe, chin, and throat all uniform black without a trace of white, and the general colour of both upper and underparts darker. Total length 7·7 inches, wing 4·2, tail 2·3, tarsus 1·2, middle toe and claw 1·4.

Adult female. Differs from the female of *O. coyolcos* in being altogether darker, especially on the upper parts; the grey markings of the mantle in the latter species being replaced by brownish black. Total length 7·4 inches, wing 4, tail 2·3, tarsus 1·1, middle toe and claw 1·35.

Hab. Putla, W. Mexico.

a, b. ♂ ♀ ad. sk.	Putla, W. Mexico, Sept. (*Rébouch*).	Gould Coll. (Types of the species.)
c, d. ♂ ♀ ad. sk.	Putla, W. Mexico, Sept. (*Rébouch*).	Salvin-Godman Coll.

8. Ortyx castaneus.

Ortyx castaneus, *Gould, P. Z. S.* 1842, p. 182; *id. Monogr. Odontoph.* pt. iii. pl. 3 (1850); *Gray, List Gallinæ Brit. Mus.* p. 76 (1867); *id. Hand-l. B.* ii. p. 273 (1870).

Adult male. Differs chiefly from *O. cubanensis* in having the top of the head, mantle, and general colour of the rest of the upper parts dark chestnut, the black markings being much reduced and the buff edges to the scapulars and outer secondaries strongly marked; the chin and throat are entirely black, and the wide white superciliary stripe of *O. cubanensis* is only represented by an indistinct white line. The chest is dark chestnut like the mantle, and the middle feathers of the breast and belly are white barred with black. Total length 9 inches, wing 4·5, tail 2·4, tarsus 1·3, middle toe and claw 1·5.

It has been suggested [Baird, Brew., and Ridgw. N. Am. B. iii. p. 468 (1874)] that this is "a somewhat melanistic plumage (of *O. virginianus*) occasionally seen in specimens from Iowa, Illinois, &c.?" but this seems to me exceedingly improbable. In the Museum collection there are varieties of *O. texanus* which have the chin and middle of the throat black, but otherwise their plumage

does not differ from the ordinary type; still, it may be a similar case to *Perdix montana*, which is no doubt only a strongly-marked rufous variety of *P. perdix*.

Hab. Unknown.

a. ♂ ad. sk. No locality. Gould Coll. (Type of the species.)

56. CYRTONYX.

Type.

Cyrtonyx, *Gould, Mon. Odontoph.* pl. vii., or pt. i. (1844), *Introd.* p. 14 (1850) ..... C. montezumæ.

Sexes different. Rather a full occipital crest, though none of the feathers are particularly elongate.

1st primary falls between 7th and 8th; 4th usually slightly the longest.

Tail composed of 12 feathers, less than half the length of the wing.

Tarsus shorter than the middle toe and claw.

Claws very long, more curved than in *Dactylortyx*.

Range. South-eastern United States of N. America, Mexico, and Central America.

Key to the Species.

I. A black-and-white patterned head. (*Males.*)
  a. Flanks dark grey, with a row of rounded paired white spots down each web ..... *montezumæ*, p. 425.
  b. Flanks grey, with a row of rounded paired rufous-buff or chestnut spots down each web ..... *sallæi*, p. 427.
  c. Flanks chestnut, irregularly barred with black shading into grey towards the margins ..... *ocellatus*, p. 428.
II. Head without black-and-white pattern. (*Females.*)

1. Cyrtonyx montezumæ.

Ortyx montezumæ, *Vigors, Zool. Journ.* v. p. 275 (1830) [Mexico]; *Jard. & Selby, Ill. Orn.* iii. pl. 126; *Bonap. P. Z. S.* 1837, p. 114.

Ortyx massena, *Lesson, Cent. Zool.* p. 189 (1830) [descr. nulla]; *id. Ill. Zool.* pl. 52 (1831).

Tetrao guttata, *La Llave, Reg. Trim.* i. p. 144 (1831); *id. La Nat. Mex.* vii. App. p. 65 (1884).

Odontophorus meleagris, *Wagl. Isis*, 1832, p. 277.

Perdix perspicillata, *Licht., fide Gould, Monogr. Odontoph.* pt. i. text to pl. 7 (1844).

Ortyx massenæ, *Finsch, Abh. nat. Ver. Brem.* 1870, p. 357 [Guadalaxara].

Cyrtonyx massena, *Gould, Monogr. Odontoph.* pt. i. pl. 7 (1844); *M'Call, Pr. Ac. Philad.* v. p. 221 (1851); *Cassin, Ill. B. Cal.* p. 21, pl. iv. (1853); *Baird, U. S. & Mex. Surv., Birds*, p. 23 (1859); *id. B. N. Amer.* p. 647 (1860); *Dresser, Ibis*, 1866, p. 29 [S. Texas]; *Coues, P. Ac. Philad.* 1866, p. 95 [Fort Whipple, Arizona]; *Gray.*

List Gallinæ Brit. Mus. p. 74 (1867); *Cooper, Cal. Orn.* i. p. 558 (1870) [Gulf of California]; *Gray, Hand-l. B.* ii. p. 272 (1870); *Coues, Key N. Am. B.* p. 239 (1872); *Baird. Brew., & Ridgw. N. Amer. B.* iii. p. 492 (1874); *Coues, B. N.-West*, p. 443 (1874); *Stephens, Bull. Nutt. Orn. C.* iii. p. 94 (1878); *Brewst. Bull. Nutt. Orn. C.* viii. p. 35 (1883) [Chiricahua Mts., Arizona]; *Coues, Key N. Am. B.* p. 594 (1884).

Cyrtonyx montezumæ, *Stejn. Auk*, ii. p. 46 (1885); *Scott, Auk*, iii. p. 389 (1886) [Arizona]; *A. O. U. Check-list*, p. 170 (1886); *Ridgw. Man. N. Am. B.* p. 194 (1887); *Lloyd, Auk*, iv. p. 187 (1887) [W. Texas]; *Peckham, P. U.S. Nat. Mus.* x. pp. 637, 656 (1887) [S.W. Texas]; *Mearns, Auk*, vii. p. 52 (1890) [Arizona]; *Bendire, N. Am. B.* p. 35, pl. i. fig. 15 (1892).

Adult male. Feathers of the top of the head black, barred and tipped with sandy brown and with buff shaft-stripes: occipital crest reddish buff; forehead, sides of the head and throat, and fore part of neck with an elegant black-and-white pattern, the black markings being arranged as follows:—the space down the middle of the forehead, a band bordering the top of the head and passing in front of the eye across the lores and cheeks and ending in a wide triangular bluish-black patch; ear-coverts, chin, middle of the throat, and a band bordering the base of the neck; a narrow line of black feathers also surrounds the eye; mantle, scapulars, lower back, and rump are pale rufous thickly barred with black; each feather, except those of the lower back, with a wide buff black-bordered shaft-stripe; the wing- and upper tail-coverts are greyer, and the black markings take the form of a row of spots on each web; primaries, primary-coverts, and secondaries dark brown, with the outer web barred with white, the bars on the inner secondaries being washed with pale rufous and extending across the outer half of the inner webs; middle of the chest and breast dark chestnut; sides and flanks dark grey, with a row of three or four paired spots on each web; rest of underparts deep black; tail-feathers very similar to the upper tail-coverts. Total length 8·2 inches, wing 5·1, tail 2·2, tarsus 1·1, middle toe and claw 1·4.

An *immature male* has the sides of the head and throat like those of the female, with only a few black feathers beginning to appear on the chin and ear-coverts.

Adult female. Feathers of the top of the head black barred with brown or rufous-buff and with pale shafts; mantle, scapulars, lower back, rump, and upper tail-coverts pale reddish or sandy brown, barred and blotched with black; all the feathers, except those of the lower back and rump, with broad buff black-edged shaft-stripes; wing-coverts pale vinaceous grey, with indistinct bars towards the base; quills like those of the male; sides of the head white, washed on the superciliaries and cheeks with pale vinaceous and dotted with black; chin and throat white; a black band commences on the ear-coverts and passing down the sides of the neck forms an ill-defined border to the base of the fore part of the neck; rest of the underparts pale vinaceous, shading into buff on the middle of the breast and belly, as well as on the under tail-coverts, and spotted and marked

with black on the webs and down the shaft, especially on the feathers of the sides and flanks. In very old (?) specimens these black marks are much reduced. Total length 7·8 inches, wing 4·7, tail 2·1, tarsus 1·1, middle toe and claw 1·35.

Hab. Mexico, extending north to Arizona and S.W. Texas, south to the City of Mexico, west to Jalisco, and east to Tamaulipas.

a–c. ♂ ♀ ad. sk. et st.	Mexico.	Gould and Eyton Colls.
d. ♂ ad. sk.	Arizona (*H. W. Henshaw*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Apache, Arizona, Sept. (*Dr. C. G. Newberry*).	Salvin-Godman Coll.
f. ♀ ad. sk.	Crittenden, Arizona, Sept. (*H. W. H.*)	Salvin-Godman Coll.
g. ♂ ad. sk.	S.E. Arizona, Sept. (*Lieut. Silman*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Yecœra, Sonora, April (*W. Lloyd*).	Salvin-Godman Coll.
i. ♂ ad. sk.	State of Chihuahua (*Buchan-Hepburn*).	Salvin-Godman Coll.
k. ♀ ad. sk.	Jesus Maria, Chihuahua, Dec. (*W. L.*)	Salvin-Godman Coll.
l, m. ♂ ad. sk.	Cañada, Chihuahua, Feb. (*W. L.*).	Salvin-Godman Coll.
n. ♂ ad. sk.	Near Choix, Sinaloa, June (*W. L.*).	Salvin-Godman Coll.
o, p. ♂ ad. sk.	Sierra Madre, Tepic, Jalisco, 6000 feet, June (*W. B. Richardson*).	Salvin-Godman Coll.
q. ♂ ad. sk.	Near City of Mexico.	Salvin-Godman Coll.
r, s. ♂ ♀ ad. sk.	Puebla (*Rébouch*).	Gould and Tweeddale Colls.
t. ♂ ad. sk.	Sierra Madre above Ciudad Victoria, Tamaulipas (*W. B. R.*).	Salvin-Godman Coll.
u–y. ♂ ♀ ad. et imm. sk.	Bandera Hills, Texas, Nov. (*H. E. Dresser*).	Salvin-Godman Coll.

2. Cyrtonyx sallæi.

Cyrtonyx sallæi, *Verr. Arcana Nat.* i. p. 35, pl. 4 (1859); *Gray, List Gallinæ Brit. Mus.* p. 74 (1867); *id. Hand-l. B.* ii. p. 272 (1870); *Ridgw. Man. N. Am. B.* p. 194 (1887).

Adult male. At once distinguished from the male of *C. montezumæ* by having the shaft-stripes to the feathers of the upper parts (except those of the mantle) orange-rufous or chestnut; the black bars on the wing-coverts, scapulars, and outer secondaries much narrower and in the form of bands which are about half the width of the interspaces; the whole of circumorbital stripe, as well as the triangular patch on the cheeks, dark bluish black; the sides of the breast and flanks paler grey, and the row of spots on each web are rufous buff or chestnut. Total length 8·3 inches, wing 5·2, tail 2·2, tarsus 1·15, middle toe and claw 1·35.

Females as yet unknown, but no doubt resemble those of *C. montezumæ*.

Hab. Mexico, State of Guerrero.

a. ♂ ad. sk.	Mexico.	Purchased of M. Verreaux. (Type of the species.)
b. ♂ ad. sk.	Mexico.	Gould Coll.
c. ♂ ad. sk.	Amula (6000 ft.), State of Guerrero, Mexico, Aug. (*D. W. Smith*).	Salvin-Godman Coll.

3. Cyrtonyx ocellatus.

Ortyx ocellatus, *Gould, P. Z. S.* 1836, p. 75.

Cyrtonyx ocellatus, *Gould, Mon. Odontoph.* pt. ii. pl. 8 (1846); *Sclat. & Salvin, Ibis*, 1859, p. 226; *Gray, List Gallinæ Brit. Mus.* p. 74 (1867); *id. Hand-l. B.* ii. p. 272 (1870) [Guatemala]; *Ridgw. Man. N. Am. B.* p. 194 (1887).

Cyrtonyx sumichrasti, *Lawr. Ann. N. Y. Sci.* i. p. 51 (1877) [Santa Efigenia, Tehuantepec].

Adult male. Differs from the male of *C. sallæi* in having many of the black markings on the upper parts in the form of round black spots; the middle of the chest and breast pale buff tipped with rufous, and the sides with buff; feathers of the flanks chestnut, somewhat irregularly barred with black, shading into grey towards the margins. Total length 8·3 inches, wing 5·3, tail 2·2, tarsus 1·25, middle toe and claw 1·5.

The *young male* has none of the black pattern on the chin, throat, and sides of the head, these parts being nearly white, while the chestnut on the breast, belly, and flanks is much paler; the feathers of the upper parts are mostly black barred with rufous buff, and with wide buff or rufous-buff shaft-stripes edged on either side with black.

Adult female. Scarcely differs from the female of *C. montezumæ*, but the general ground-colour of the upper parts is black, finely barred with rufous and mottled towards the tips of the feathers with sandy, and the outer wing-coverts are more distinctly barred with black. Total length 8 inches, wing 5, tail 2·2, tarsus 1·25, middle toe and claw 1·45.

An *immature female* has most of the underparts pale rufous buff with small spots of black, the adult vinaceous feathers being partially represented on the sides and flanks.

Hab. Central America; Tehuantepec and Guatemala.

a. ♂ ad. sk.	Guatemala.	Purchased.
b. ♀ ad. sk.	Guatemala.	Gould Coll.
c. ♂ ad. sk.	Quezaltenango, Guatemala, Sept. (*O. S.*).	Salvin-Godman Coll.
d–f. ♂ ♀ ad. et imm. sk.	Dueñas, Guatemala (*O. S.*).	Salvin-Godman Coll.
g–i. ♂ ♀ ad. sk.	Toliman (5000 ft.), Guatemala, Dec. (*W. B. Richardson*).	Salvin-Godman Coll.

57. DACTYLORTYX.

Sexes different. Occipital feathers lengthened into a short crest.
1st primary equals the 8th; 4th longest.
Tail composed of 12 feathers, $\frac{2}{5}$ of the length of the wing.
Tarsus much shorter than the middle toe and claw.
Claws very long, much like those of *Arboricola*.
Bill moderately stout, not so deep as that of *Odontophorus*.

Range. Central America; Southern Mexico, Yucatan, Guatemala, and San Salvador.

1. Dactylortyx thoracicus.

Ortyx thoracicus, *Gambel, P. Ac. Philad.* iv. p. 77 (1848) [Jalapa, Mexico].
Perdix lineolata, *Licht. in Mus. Berlin, fide Gould, Monogr. Odontoph.* pt. iii. text to pl. 32 (1850).
Ortyx lineolatus, *Natterer, MS., fide Gould, Monogr. Odontoph.* pt. iii. text to pl. 32 (1850).
Odontophorus lineolatus, *Gould, Monogr. Odontoph.* pt. iii. pl. 32 (1850); *Gray, List Gallinæ Brit. Mus.* p. 73 (1867); *id. Hand-l. B.* ii. p. 272 (1870).
Strophiortyx lineolatus, *Bonap. C. R.* xlii. p. 883 (1856).
Odontophorus thoracicus, *Sclat. & Salvin, Ibis*, 1860, p. 276 [Volcan de Fuego].

Adult male. Top of the head brown, more or less washed with rusty, the feathers down the middle with pale shaft-stripes; feathers of the nape black mixed with brown and with wide buff centres; mantle almost similar to the top of the head; lower back, rump, and upper tail-coverts pale olive-brown, some of the feathers, especially the upper tail-coverts, indistinctly blotched with black near the extremity of the shaft; scapulars, wing-coverts, and outer secondaries largely mixed with black towards the extremities of the inner or both webs, the rest of the feathers finely mottled with sandy brown, rufous, and black, shading into greyish on the outer webs; all the feathers have pale buff shaft-stripes, and the longer scapulars and outer secondaries have the outer web margined with golden buff; quills brown, mottled with buff on the outer web; superciliary stripe, cheeks, chin, and throat reddish chestnut, ear-coverts dark brown, and a black patch of feathers on the side of the throat; chest and rest of underparts grey, faintly washed with reddish brown, and with white shaft-stripes; thighs like the upper tail-coverts; middle of belly and vent white; under tail-coverts buff, irregularly barred with black; tail blackish brown, with irregular mottled bars of buff. Total length 9 inches, wing 5·3, tail 2·2, tarsus 1·3, middle toe and claw 1·7.

A *nearly mature male* has the middle of the chin and throat white and some of the feathers of the chest and breast spotted with black.

Adult female has the upper parts very similar to those of the male, but the superciliary stripes and cheeks are greyish white; the chin and throat white, and the chest and breast dull brick-red, with

pale shafts. Total length 8·5 inches, wing 5·3, tail 2, tarsus 1·3, middle toe and claw 1·7.

Immature females have the chest and sides of the breast spotted with black; and in *still younger* birds the sides and flanks are also thickly spotted with black.

Hab. Same as that of the genus.

a. ♀ ad. st.	Mexico.	Purchased.
b. ♀ vix ad. sk.	Hacienda de Los Atlixcos, Mexico, March (*F. D. G.*).	Salvin-Godman Coll.
c. ♀ vix ad. sk.	Sierra Madre del Sur, Mexico (*D. W. Smith*).	Salvin-Godman Coll.
d. Imm. sk.	Atoyac, Mexico, May (*D. W. Smith*).	Salvin-Godman Coll.
e. ♂ ad. st.	Cordoba, Mexico.	Purchased of M. Verreaux.
f. ♀ ad. sk.	Omilteme (8000 ft.), State of Guerrero, July (*D. W. Smith*).	Salvin-Godman Coll.
g, *h*. ♂ ♀ ad. sk.	Tizimin, Northern Yucatan, April (*G. F. Gaumer*).	Salvin-Godman Coll.
i. ♀ ad. sk.	Peto, Yucatan, April (*G. F. G.*).	Salvin-Godman Coll.
k. ♂ ad. sk.	Guatemala.	Purchased of M. Verreaux.
l–*p*. ♂ ♀ ad. et imm. sk.	Volcan de Fuego, Guatemala, Jan., Feb., Aug., & Sept. (*O. S.*).	Salvin-Godman Coll.
q–*t*. ♂ ♀ ad. et imm. sk.	Dueñas, Guatemala, Oct. (*O.S.*).	Salvin-Godman Coll.
u. ♂ ad. sk.	Quezaltenango, Guatemala, Oct. (*O. S.*).	Salvin-Godman Coll.
v. ♀ ad. sk.	Volcan de San Miguel, Salvador, March (*W. B. Richardson*).	Salvin-Godman Coll.

58. ODONTOPHORUS *.

	Type.
Odontophorus, *Vieill. Analyse*, p. 51 (1816); *id. N. Dict. d'Hist. Nat.* xxxiv. p. 177 (1819); *Gould, Monogr. Odontoph., Introd.* p. 21 (1850)	O. guianensis.
Dentophorus, *Merr., fide Gray, Hand-l. B.* ii. p. 271 (1870).	
Strophiortyx, *Bonap. C. R.* xlii. p. 883 (1856)	O. columbianus.

Sexes similar or almost similar in plumage. Moderately long and full occipital crest.

1st primary shorter than the 10th; 4th or 5th rather the longest.

Tail composed of 12 feathers, not more than half the length of the wing.

Tarsus not longer than the middle toe and claw.

Bill very stout; claws moderate.

Range. Central and South America.

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* Doubtful species:—

White-cheeked Partridge, p. 304, *Mexican Partridge*, p. 322, and ?*Hudsonian Quail*, p. 330; Lath. Gen. Hist. viii. (1823).

Key to the Species.

A. Chest and breast not spotted with white.
  a. General colour of chest brownish buff; outer webs of primaries barred with buff.
    a'. Cheeks and chin dark chestnut ..... *guianensis* ♂ ♀, p. 432.
    b'. Cheeks rust-red; chin whitish..... *marmoratus* ♂ ♀, [p. 433.
  b. General colour of chest grey; outer webs of primaries barred with white..... *capueira* ♂ ♀, p. 434.
  c. General colour of chest rust-red, rufous chestnut, or dark chestnut.
    c'. Superciliary stripe rufous chestnut or rust-colour.
      a''. Chin and throat black.
        a'''. Top of head uniform chestnut like the superciliary stripe; ear-coverts black ..... *melanotis* ♂ ♀, p. 435.
        b'''. Top of the head blackish brown, contrasting with the superciliaries; ear-coverts chestnut .... *erythrops* ♂ ♀, p. 435.
      b''. Chin and throat rust-red.
        c'''. Breast and belly rust-red ..... *hyperythrus* ♂, p. 436.
        d'''. Breast and belly dark grey..... *hyperythrus* ♀, p. 436.
    d'. Superciliary stripe of mottled black and white feathers.
      c''. Breast and belly rust-red..... *speciosus* ♂, p. 437.
      d''. Breast and belly grey ..... *speciosus* ♀, p. 437.
    e'. Superciliary stripe brownish black like the top of the head ..... *melanonotus*, p. 438.
  d. General colour of chest black ..... *leucolæmus* ♂ ♀, p. 438.
B. Chest and breast spotted with white.
  e. Chin and throat grey; general colour of the underparts brick-red.
    f'. Hinder part of crest bright rust-red .. *stellatus* ♂, p. 439.
    g'. Hinder part of crest brownish black .. *stellatus* ♀, p. 439.
  f. Chin and throat black, with white shaft-stripes.
    h'. General colour of the underparts brownish buff.
      e''. Hinder part of crest bright rust-red . *guttatus* ♂, p. 439.
      f''. Hinder part of crest brownish black. *guttatus* ♀, p. 439.
    i'. General colour of the underparts rufous or rufous-brown; whole crest rust-red, rather darker in female ..... *veraguensis* ♂ ♀, p. 441.
  g. Chin buff or rufous-buff; throat smoky buff, with pale buff shafts; general colour of the underparts dark chestnut..... *balliviani*, p. 441.
  h. Chin white; throat black; fore part of neck white, edged below with a black band; general colour of underparts deep rust-red, paler towards the middle of the breast ..... *strophium*, p. 442.
  i. Chin and throat white, barred on the sides with black; general colour of underparts reddish brown ..... *columbianus*, p. 442.

1. Odontophorus guianensis.

Le Tocro ou Perdrix de la Guyane, *Buff. Hist. Nat. Ois.* iv. p. 513 (1778).

Guiana Partridge, *Lath. Gen. Syn.* ii. pt. ii. p. 776 (1783); *id. Gen. Hist.* viii. p. 323 (1823).

Tetrao guianensis, *Gm. S. N.* i. pt. ii. p. 767 (1788).

Perdix guianensis, *Lath. Ind. Orn.* ii. p. 650 (1790); *Bonn. Tabl. Encycl. Méth.* i. p. 216 (1791).

Perdix dentata, *Temm. Pig. et Gall.* iii. pp. 419, 734 (1815).

Perdix rufina, *Spix, Av. Sp. Nov.* ii. p. 60, pl. 76 *b* (1825) [Forests of the Amazon].

Odontophorus rufus, *Vieill. Gal. Ois.* ii. p. 38, pl. 211 (1825).

Odontophorus guianensis, *Gould, Monogr. Odont.* pt. i. pl. 23 (1844); *Gray, List of B.* pt. iii. *Gall.* p. 43 (1844); *Cab. in Schomb. Brit. Guiana*, pt. iii. p. 747 (1848); *Sclat. & Salvin, P. Z. S.* 1867, p. 591 [Capim R.]; *Gray, List Gallinæ Brit. Mus.* p. 71 (1867); *id. Hand-l. B.* ii. p. 271 (1870); *v. Pelz. Orn. Bras.* p. 289 (1870); *Brown, Brit. Guiana*, p. 371 (1876); *Salvin, Ibis*, 1886, p. 175 [Bartica Grove, Merumé Mts., Camacusa]; *Riker & Chapman, Auk*, viii. p. 162 (1891) [Santarem, Brazil].

Adult male and female. General colour of the top of the head deep chestnut, with irregular marks and dots of paler rufous and black; nape and mantle grey, finely mottled with black; lower back and rump sandy rufous-brown, shading into darker rufous on the upper tail-coverts and all dotted with black, but in very old specimens these black dots are almost obsolete; wing-coverts, scapulars, and outer secondaries rufous, blotched, especially towards the tip of the inner web, with black and all irregularly marked and mottled with the same colour—some of the scapulars have an irregular dirty white or grey band on the outer web next the shaft and the longer scapulars and outer secondaries have the inner web edged with buff; quills dark brown, irregularly barred on the outer web with buff; chin, cheeks, and sides of throat dark chestnut; ear-coverts buff; middle of throat and fore part of neck greyish; chest and rest of underparts paler or darker rufous-buff, more or less barred and marked with dusky on the chest, sides, and flanks*; tail dark rufous-brown with indistinct bars. Bill bluish black; iris hazel; naked skin round the eye vermilion: legs and toes bluish lead.

Male. Total length 11·5 inches, wing 5·9, tail 2·8, tarsus 1·6, middle toe and claw 1·8.

Female. Total length 10 inches, wing 5·4, tail 2·3, tarsus 1·5, middle toe and claw 1·6.

Hab. British Guiana and Lower Amazons.

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* In some specimens these barrings are much heavier and more marked than in others; but, apparently, this is not due to age, and in what appears to be a perfectly adult male specimen from Camacusa, British Guiana, the whole of the underparts are barred with black, and in general appearance the bird closely resembles specimens of *O. marmoratus*, which appear to us to be barely subspecifically distinct, but more material is necessary to decide this question.

a, b. Ad. sk.	S. America.	Gould Coll.
c. Ad. sk.	Demerara, Brit. Guiana.	Gould Coll.
d. ♂ ad. sk.	Bartica Grove, Brit. Guiana, Dec. (*H. Whitely*).	Salvin-Godman Coll.
e. ♂ ? ad. sk.	Camacusa, Brit. Guiana, April (*H. Whitely*).	Salvin-Godman Coll.
f. ♀ ad. sk.	Merumé Mts., Brit. Guiana, June (*H. Whitely*).	Salvin-Godman Coll.
g. ♀ ad. sk.	Barra do Rio Negro, Brazil, Oct. (*Natterer*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Capim River, June (*Wallace*).	Salvin-Godman Coll.

Subsp. *a.* Odontophorus marmoratus.

Ortyx (Odontophorus) marmoratus, *Gould, P. Z. S.* 1843, p. 107 [Santa Fé de Bogota].

Odontophorus pachyrhynchus, *Tschudi, Fauna Peruana*, p. 282 (1844–46); *Gould, Monogr. Odontoph.* pt. iii. pl. 24 (1850); *Gray, List Gallinæ Brit. Mus.* p. 71 (1867); *id. Hand-l. B.* ii. p. 271 (1870); *Tacz. P. Z. S.* 1874, p. 558 [Monterico, Central Peru]; *id. Orn. Pérou*, iii. p. 287 (1886).

Odontophorus guianensis, *Lawrence* (*nec Gm.*), *Ann. Lyc. N. York*, vii. p. 301 (1862) [New Granada].

Odontophorus marmoratus, *Sclat. & Salvin, P. Z. S.* 1864, p. 371 [Panama]; *Gray, List Gallinæ Brit. Mus.* p. 71 (1867); *id. Hand-l. B.* ii. p. 271 (1870); *Salvin, P. Z. S.* 1870, p. 218 [Bugaba, Chiriqui]; *Sclat. & Salvin, P. Z. S.* 1879, p. 545 [Remedios, Antioquia], p. 641 [Yuyo, Bolivia].

Adult male and female. This form appears to intergrade with *O. guianensis*, but more material is required before the question can be satisfactorily settled. The characters by which the present subspecies is apparently distinguished are that the sides of the head and chin are rust-red, the general colour of the underparts darker and almost invariably barred with black and buff, though amongst the series before us we find a specimen from Lion Hill, Panama, which so closely approaches typical *O. guianensis* that it cannot be distinguished. No doubt the present form is barely subspecifically distinct from Guiana birds, and is absolutely identical with *O. pachyrhynchus*, Tschudi, from Peru. Total length 11 inches, wing 6·2, tail 3, tarsus 1·7, middle toe and claw 1·3 *.

An immature bird differs chiefly in having the crest and top of the head uniform dark reddish brown, very faintly vermiculated with dusky; the mantle grey, slightly washed with sandy brown and with very faint or almost imperceptible dusky vermiculations; the dull reddish-brown middles of the outer secondaries sharply defined from the black marginal lines and almost devoid of black vermiculations; the inner webs of the quills, especially the outer

* Specimens from Panama are considerably smaller than those from the U.S. of Colombia. A Panama male has the wing 5·5, tail 2·7. The marked difference in size between the sexes observed in *O. guianensis* does not apparently obtain in the present form, judging from Panama specimens only, as none of our specimens from the U.S. of Colombia are marked as females.

primaries, mottled with buff; and both upper and lower mandibles orange-red.

Hab. Western S. America, ranging north into Panama, south to Bolivia.

a. Ad. sk.	Panama.	Tweeddale Coll.
b, c. ♂ ♀ vix ad. sk.	Bugaba, Chiriqui (*Arcé*).	Salvin-Godman Coll.
d, e. ♂ ♀ vix ad. sk.	Chepo, Isthmus of Panama (*Arcé*).	Salvin-Godman Coll.
f, g. ♀ ad. sk.	Lion Hill, Panama (*McLeannan*).	Salvin-Godman Coll.
h. Ad. sk.	U.S. of Colombia.	Purchased.
i–l. ♂ ad. sk.	U.S. of Colombia.	Salvin-Godman Coll.
m. ♂ ad. sk.	Remedios, U.S. of Colombia (*Salmon*).	Salvin-Godman Coll.
n. Ad. sk.	Santa Fé de Bogota.	Gould Coll.
o. Ad. sk.	Santa Fé de Bogota.	Gould Coll. (Type of the species.)
p, q. Ad. sk.	Sarayacu, Ecuador (*Buckley*).	Salvin-Godman Coll.
r. Ad. sk.	Peru (*Tschudi*).	Gould Coll. (One of the typical examples of *O. pachyrhynchus*, Tschudi.)
s. Imm. sk.	Yuyo, Bolivia (*Buckley*).	Salvin-Godman Coll.

2. Odontophorus capueira.

Perdix capueira, *Spix, Av. Sp. Nov.* ii. p. 59, pl. 76 A (1825) [Rio de Janeiro].
Perdix dentatus, *Max.* (*nec Temm.*) *Beitr. Nat. Bras.* iv. p. 486 (1832).
Ortyx capistrata, *Jard. & Selb. Ill. Orn.* i. text to pl. 38.
Odontophorus capistratus, *Gray, List of B.* pt. iii. *Gall.* p. 43 (1844).
Odontophorus dentatus, *Gould* (*nec Temm.*), *Monogr. Odontoph.* pt. ii. pl. 26 (1846); *Burmeister, Uebers. Thiere Bras.* iii. p. 333 (1856); *Gray, List Gallinæ Brit. Mus.* p. 71 (1867); *id. Hand-l. B.* ii. p. 271 (1870); *v. Pelz. Orn. Bras.* p. 289 (1870); *Reinhardt, Vid. Medd. Kjöbenh.* 1870, p. 52.

Adult male. Upper parts very similar to those of *O. guianensis*, but the mantle is brown or rufous brown blotched with black and with pale buff shafts; the markings on the outer webs of the primaries are white; and the chin, throat, and underparts are dark grey. Bill black; legs and feet greyish black. Total length 11 inches, wing 6·2, tail 3·1, tarsus 1·8, middle toe and claw 1·95.

Adult female. Similar in plumage to themale, but rather smaller.

Immature birds have the pale shaft-streaks on the mantle wider and more conspicuous than the adults; the black shaft-spots, too, on the lower back and rump are *much coarser*, and the grey underparts are washed with reddish brown.

In *quite young specimens* the shaft-stripes of the mantle are still wider; the lower back, rump, and upper tail-coverts are *devoid* of black shaft-spots; the chest and underparts are rufous brown, marked and barred with black and buff. The upper mandible is orange; the lower yellowish.

Hab. Eastern South America, ranging north to Bahia, west to Goyaz, and south to Rio Grande del Sur.

a. Ad. sk.	Brazil.	
b, *c*. Imm. et juv. sk.	Brazil.	Lord Stuart de Rothesay [P.].
d. Ad. sk.	Brazil.	Salvin-Godman Coll.
e–g. Ad. sk.	Bahia (*Wucherer*).	Salvin-Godman and Gould Colls.
h. ♂ juv. sk.	Rio Claro, Goyaz (*Joyner*).	Salvin-Godman Coll.
i, *k*. ♂ ad. et imm. sk.	São Paulo (*Joyner*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Casa pintada, São Paulo, Jan. (*Natterer*).	Salvin-Godman Coll.
m. ♂ ad. sk.	Rio Grande del Sur.	Tweeddale Coll.

3. Odontophorus melanotis.

Odontophorus melanotis, *Salvin*, *P. Z. S.* 1864, p. 586 [Tucurriqui, Costa Rica]; *id. P. Z. S.* 1867, p. 161 [Veragua]; *Gray*, *Hand-l. B.* ii. p. 272 (1870); *Salvin*, *Ibis*, 1872, pp. 313, 323 [Chontales, Nicaragua]; *Richmond*, *P. U.S. Nat. Mus.* xvi. p. 524 (1893) [Escondido R., Nicaragua].

Odontophorus melanotus, *Zeledon*, *P. U.S. Nat. Mus.* viii. p. 112 (1886) [Costa Rica].

Adult male. Differs chiefly from the male of *O. speciosus* in having the whole of the top of the head and superciliary feathers deep chestnut; ground-colour of the upper parts brownish black: mantle without white shaft-stripes; the outer webs of the primaries marked with rufous buff; and the general colour of the chest and underparts dark chestnut. Total length 9·5 inches, wing 5·8, tail 2·2, tarsus 1·75, middle toe and claw 1·85.

Having no specimens sexed as females, it is impossible to state with certainty what the difference is between the two sexes; but I believe that the specimens which have the inner webs of the outer secondaries tipped with buff are females.

Hab. Central America: Nicaragua, Costa Rica, and Veragua.

a, *b*. Ad. sk. et head.	Chontales, Nicaragua (*Belt*).	Salvin-Godman Coll.
c. Ad. sk.	Costa Rica (*Arcé*).	Salvin-Godman Coll.
d. Ad. sk.	Tucurriqui, Costa Rica (*Arcé*).	Salvin-Godman Coll. (Type of species.)
e. ♂ ad. sk.	Veragua (*Arcé*).	Salvin-Godman Coll.

4. Odontophorus erythrops.

Odontophorus erythrops, *Gould*, *P. Z. S.* 1859, p. 99 [Pallatanga, Ecuador]; *Taez. P. Z. S.* 1883, p. 576 [Chimbo, W. Ecuador].

Adult male. General colour and markings of the upper parts very similar to those of *O. melanotis*, but darker; the central part of the top of the head dark brown, indistinctly vermiculated with black; the lores and superciliary stripes more rufous chestnut; a chestnut stripe running from the gape passes across the cheeks to the ear-coverts; and the chest and rest of underparts are darker

chestnut. Total length 9·6 inches, wing 5·9, tail 2·5, tarsus 1·8, middle toe and claw 1·9.

Female. Plumage probably almost identical with that of the male.

Hab. Ecuador.

a. Ad. sk.	Pallatanga, Ecuador (*Fraser*).	Eyton Coll.
b, c. ♂ ad. et ad. sk.	Pallatanga, Ecuador, Oct. (*Fraser*).	Gould Coll. (Types of species.)
d. Ad. sk.	Balzar Mts., Ecuador (*Illingworth*).	Salvin-Godman Coll.
e, f. Ad. sk.	Monji, Ecuador (*C. Buckley*).	Salvin-Godman Coll.

5. Odontophorus hyperythrus.

Odontophorus hyperythrus, *Gould*, *P. Z. S.* 1857, p. 223 [Santa Fé de Bogota]; *Sclat. & Salvin*, *P. Z. S.* 1879, p. 545 [Santa Elena, Antioquia].

Odontophorus hypospodius, *Sclat. & Salvin*, *Nomencl. Av. Neotrop.* p. 163 (1873) [Antioquia].

Adult male. General colour above olive-brown, slightly washed with rufous and finely vermiculated with black; the scapulars and outer secondaries are marked very similarly to those of the other species, and the rest of the quills are like those of *O. leucolæmus*; lores, superciliary stripes, chin, throat, and underparts deep rust-red, rather paler towards the middle of the breast and belly; a small patch of white on the ear-coverts; the thighs, vent, and under tail-coverts rufous brown vermiculated with black, and the latter edged with rufous buff. Total length 11 inches, wing 5·9, tail 2·4, tarsus 2, middle toe and claw 2·15.

Adult female. Differs from the male in having the breast and rest of underparts dark grey, shading into blackish grey on the flanks. Total length 10·4 inches, wing 5·6, tail 2·2, tarsus 1·8, middle toe and claw 1·9.

Less mature males have the feathers of the wing-coverts and scapulars spotted with buff at the extremity, some of the feathers of the mantle blotched or marked with black, and the ridge of the culmen and the tip of the beak orange-red.

Less mature females have the grey feathers of the breast and belly mixed here and there with rust-colour.

It would thus appear that the young females in their first plumage resemble the male parent and have the whole of the underparts rust-coloured, and that the grey plumage of the adult female gradually takes the place of the rufous; for in the specimens before us all the new feathers which are being moulted-in are grey, while some of the old rufous feathers appear to be changing to grey without a moult.

Hab. U.S. of Colombia.

a. ♂ ad. sk.	Santa Fé de Bogota, U.S. of Colombia.	Gould Coll. (Type of species.)
b. ♀ vix ad. sk.	Santa Fé de Bogota, U.S. of Colombia.	Gould Coll.

c–e. ♂ ad. et ♂ ♀ imm. sk.	Santa Elena, Antioquia, U.S. of Colombia (*T. K. Salmon*).	Salvin-Godman Coll.
f. ♀ ad. sk.	Concordia, Antioquia, U.S. of Colombia (*T. K. Salmon*).	Salvin-Godman Coll. (Type of *O. hypospodius*, Scl. & Salv.)

6. Odontophorus speciosus.

Odontophorus speciosus, *Tschudi, Wiegm. Arch.* 1843, p. 387; *id. Fauna Peruana*, p. 281, pl. xxxiii. (1844–46) [Chanchomayo, Peru]; *Gould, Monogr. Odontoph.* pt. iii. pl. 25 (1850); *Gray, List Gallinæ Brit. Mus.* p. 71 (1867); *id. Hand-l. B.* ii. p. 271 (1870); *Tacz. P. Z. S.* 1874, p. 558 [near Chilpes, Central Peru]; *id. Orn. Pérou*, iii. p. 288 (1886).

Adult male. Top of the head dark reddish brown, faintly vermiculated with black; upper parts similar but paler, the scapulars and outer secondaries with the usual black patches near the extremity: most of the feathers of the back of the neck and mantle with whitish-buff shaft-stripes; wing-coverts and scapulars mostly with a triangular buff spot at the extremity; most of the feathers of the lower back with a black shaft-spot near the extremity; quills brown, the inner primaries slightly and the secondaries largely mottled with buff on the outer web; well-marked black and white superciliary stripes passing backwards above the ear-coverts down the sides of the neck; chin, throat, and sides of face black; neck, chest, and rest of underparts bright rust-red; thighs and under tail-coverts brownish, with mottled bars of black and rufous-buff tips. Total length 10 inches, wing 5·7, tail 2·2, tarsus 1·8, middle toe and claw 1·9.

This species is nearly allied to *O. hyperythrus*, but is easily distinguished by the black-and-white eyebrow and black chin and throat.

A younger male differs from the adult in having the black-and-white superciliary stripe much reduced in width; mantle with scarcely any trace of pale shaft-stripes; the inner webs of the longer scapulars and outer secondaries widely edged towards the extremity with rich rufous buff: chin, throat, and sides of the face chestnut with dusky margins.

Adult female. Differs chiefly from the adult male in having only the chest rufous chestnut, the breast and belly being dark grey with a few of the feathers on the sides tinged with rufous. Total length 9·5 inches, wing 5·3, tail 2·1, tarsus 1·8, middle toe and claw 1·9.

Hab. Ecuador and Peru.

a. Ad. sk.	Chanchomayo, Peru (*Tschudi*).	Gould Coll. (One of the typical specimens.)
b, c. ♀ ad. et ♂ vix ad. sk.	Granadillas, Ecuador (*C. Buckley*).	Salvin-Godman Coll.

7. Odontophorus melanonotus.

Odontophorus melanonotus, *Gould, P. Z. S.* 1860, p. 382 [Ecuador].

Adult. General colour of the upper parts deep brownish black, indistinctly vermiculated with pale rufous; chin, throat, chest, and upper breast deep rust-red or reddish chestnut; rest of the underparts like the back, but the vermiculations are more strongly marked and sand-coloured. Bill black and very stout; legs and feet horny black (in skin). Total length 10 inches, wing 5·5, tail 2·1, tarsus 2, middle toe and claw 2·15.

Hab. Ecuador.

a. Ad. sk.	Ecuador.	Gould Coll. (Type of species.)
b. Ad. sk.	Rio Napo, Ecuador.	Salvin-Godman Coll.

8. Odontophorus leucolæmus.

Odontophorus leucolæmus, *Salvin, P. Z. S.* 1867, p. 161 [Veragua]; *Gray, Hand-l. B.* ii. p. 272 (1870); *Zeledon, P. U.S. Nat. Mus.* viii. p. 112 (1886) [Costa Rica].

Adult male and female. General colour of the upper parts dark olive-brown, slightly washed with rufous and thickly vermiculated with black; the scapulars and outer secondaries blotched with black towards the extremity, the latter being also tipped with golden buff on the inner web; quills dark brown; secondaries irregularly mottled with rufous on the outer web; the forehead, sides of the head and throat, and the chest and breast black, the feathers of the latter with irregular hidden white bars; the chin and middle of the throat white; the rest of the underparts rich rufous brown, the feathers of the belly being mixed with black, those of the thighs and under tail-coverts tipped with pale rufous, and all more or less thickly vermiculated with black.

Adult male. Total length 9 inches, wing 5·3, tail 2·2, tarsus 1·8, middle toe and claw 1·95.

Adult female. Total length 8 inches, wing 5, tail 2, tarsus 1·65, middle toe and claw 1·75.

In what appears to be the oldest male example the chin is black and only a small triangular patch of white remains on the middle of the throat, whilst the hidden white bars on the breast-feathers are nearly obsolete.

Hab. Costa Rica and Veragua.

a. Ad. sk.	Dota, Costa Rica (*J. Carmiol*).	Salvin-Godman Coll.
b. ♂ ad. st.	Veragua (*Arcé*).	Salvin-Godman Coll.
c. ♀ ad. sk.	Cordillera de Tolé, Veragua (*Arcé*).	Salvin-Godman Coll. (Type of species.)
d, e. ♂ ad. et pull. sk.	Calovevora, Veragua (*Arcé*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Chitra, Veragua (*Arcé*).	Gould Coll.

9. Odontophorus stellatus.

Ortyx (Odontophorus) stellata, *Gould, P. Z. S.* 1842, p. 183.
Odontophorus stellatus, *Gray, List of B.* pt. iii. *Gall.* p. 43 (1844); *Gould, Monogr. Odontoph.* pt. ii. pl. 27 (1846); *Sclat. & Salvin, P. Z. S.* 1867, p. 753; *Gray, List Gallinæ Brit. Mus.* p. 72 (1867); *id. Hand-l. B.* ii. p. 272 (1870); *v. Pelz. Orn. Bras.* p. 290 (1871) [Lake Manaqueri and Borba]; *Sclat. & Salvin, P. Z. S.* 1873, p. 307 [Chayavetas, Chamicuros, E. Peru]; *Tacz. Orn. Pérou*, iii. p. 289 (1886).
Ortyx leucostictos, *Natterer, MSS., fide Gould, Monogr. Odontoph.* pt. ii. text to pl. 27 (1846).

Adult male. Upper parts very similar to those of *O. guianensis*; but the occipital crest is longer and of a bright rufous chestnut colour; the chin and throat grey; chest and rest of underparts deep brick-red; the feathers of the sides of the chest and breast with a subterminal diamond-shaped white shaft-spot edged externally with black. Bill black; legs and feet horn-black (in skin). Total length 10·5 inches, wing 5·5, tail 2·7, tarsus 1·5, middle toe and claw 1·6.

Adult female. Differs from the male in having the elongate occipital crest deep brownish black. Total length 10 inches, wing 5·3, tail 2·5, tarsus 1·5, middle toe and claw 1·6.

Immature male differs from the adult in having the forehead and mantle light uniform brown, some of the feathers, especially on the side of the head and back of the neck, with short white shaft-stripes, the occipital crest brighter reddish chestnut, the lower back and rump paler and without any black shaft-spots, the inner webs of the quills mottled with buff, and the general colour of the underparts brighter and more of a rust-red. The upper mandible is reddish orange, the lower yellowish.

Hab. Central South America, ranging westwards to Eastern Ecuador and Eastern Peru and eastwards to Borba, Rio Madeira.

a, b. ♂ ♀ ad. sk.	Brazil.	Lord Stuart de Rothesay [P.]. (Types of the species.)
c. ♂ imm. sk.	Borba, Rio Madeira, Jan. (*Natterer*).	Salvin-Godman Coll.
d. ♀ ad. sk.	Rio Napo, Ecuador.	Salvin-Godman Coll.
e, f. ♂ ad. sk.	E. Peru (*E. Bartlett*).	Gould Coll.
g. ♀ ad. sk.	Chayavetas, E. Peru, Aug. (*E. Bartlett*).	Salvin-Godman Coll.

10. Odontophorus guttatus.

Ortyx guttata, *Gould, P. Z. S.* 1837, p. 79 [Bay of Honduras].
Odontophorus guttatus, *Gray, List of B.* pt. iii. *Gall.* p. 43 (1844); *Gould, Monogr. Odontoph.* pt. ii. pl. 28 (1846); *Sclat. & Salvin, Ibis*, 1859, p. 226; *Gray, List Gallinæ Brit. Mus.* p. 72 (1867); *id. Hand-l. B.* ii. p. 272 (1870); *Salvin, P. Z. S.* 1870, p. 218 [Chiriqui]; *Sumichrast, La Naturaleza*, (2) p. 37 (1870) [Vera Cruz]; *Boucard, P. Z. S.* 1878, p. 42 [San José, Costa Rica]; *Zeledon, P. U.S. Nat. Mus.* viii. p. 112 (1886) [Costa Rica].

Odontophorus consobrinus, *Ridgw. P. U.S. Nat. Mus.* xvi. p. 469 (1893) [Vera Cruz].

Adult male. Upper parts very similar to *O. guianensis*, but the general ground-colour of the nape and mantle is olive-brown instead of grey; the whole of the forehead and fore part of the crest brownish black, the hinder part bright rust-red; the outer webs of the primaries indistinctly mottled with buff, never regularly barred or marked; a dark chestnut band commencing below the eye crosses the ear-coverts and passes down each side of the neck; cheeks, chin, and throat black, with white shaft-stripes; rest of underparts greyish olive-brown, tinged on the sides and flanks with rufous, each feather with a subterminal white spot partially or wholly edged with black. Bill black; legs and feet horn-black (in skin). Total length 11 inches, wing 5·9, tail 2·8, tarsus 1·7, middle toe and claw 1·9.

Adult female differs from the male in having the whole crest brownish black (younger examples show traces of rufous on some of the underneath feathers), and well defined whitish-buff shaft-streaks down the feathers of the mantle which are scarcely visible in fully adult males. Total length 10·5 inches, wing 5·7, tail 2·7, tarsus 1·7, middle toe and claw 1·8.

In *immature birds* (of both sexes?) the hinder part of the crest is rust-red as in the adult male; the neck, chest, breast, and sides are mottled and barred with black, and the white diamond-shaped spots take more the form of shaft-stripes; the chin and throat are mostly greyish brown, with a few of the adult feathers on the chin and sides; and the upper and lower mandibles are orange-red.

A *quite young bird* has the rust-red hind crest well developed; and apparently the young resemble the male and differ from the female parent in this respect, but the want of properly sexed female specimens prevents my being quite certain of this.

Specimens from Dota, Costa Rica, and Chiriqui, where the ranges of the present species and *O. veraguensis* overlap, are somewhat intermediate, having the underparts more or less strongly washed with rufous.

Hab. Central America; Southern Mexico to Chiriqui.

a, b. ♂ ad. sk.	Mexico.	Purchased.
c. ♂ ad. st.	Cordoba, Vera Cruz, Mexico.	Purchased of M. Verreaux.
d–g. ♂ ♀ ad. et imm. sk.	Chimalapa, Tehuantepec, March (*W. R. Richardson*).	Salvin-Godman Coll.
h. ♀ imm. sk.	Vera Paz, Guatemala, Nov. (*O. S.*).	Salvin-Godman Coll.
i. ♀ ad. sk.	Dueñas, Jan. (*O. S.*).	Salvin-Godman Coll.
k, l. ♂ imm. et ♀ vix ad. sk.	Volcan de Fuego (5500 feet), Aug., Nov. (*O. S.*).	Salvin-Godman Coll.
m. ♀ ad. sk.	Volcan de Agua, Nov. (*O. S.*).	Salvin-Godman Coll.
n. Pull. sk.	British Honduras (*F. Blancaneaux*).	Salvin-Godman Coll.
o, p. ♂ ♀ ad. sk.	San Felipe, W. Dist. British Honduras, May (*F. B.*).	Salvin-Godman Coll.

q. ♀ ad. sk.	Belize, British Honduras (*F. Blancancaux*).	Salvin-Godman Coll.
r, *s*. ♀ ad. sk.	Honduras (*Capt. Barlow*).	Zool. Soc. Coll. (Types of the species.)
t. ♂ imm. sk.	Costa Rica.	Purchased.
u. ♂ ad. sk.	Barranca, Costa Rica, Feb. (*J. Carmiol*).	Salvin-Godman Coll.
v. ♂ ad. sk.	Dota, Costa Rica, Jan. (*J. Carmiol*).	Salvin-Godman Coll.
w. ♂ ad. sk.	Chiriqui (*Arcé*).	Salvin-Godman Coll.
x–*z*. ♂ ad. sk.	Volcan de Chiriqui (*Arcé*).	Salvin-Godman Coll.
a'. ♂ ad. sk.	Central America.	Purchased.

11. Odontophorus veraguensis.

Odontophorus veraguensis, *Gould*, *P. Z. S.* 1856, p. 107 [Veragua]; *Salvin*, *P. Z. S.* 1867, p. 161 [Panama]; *Gray*, *List Gallinæ Brit. Mus.* p. 72 (1867): *id. Hand-l. B.* ii. p. 272 (1870); *Zeledon*, *P. U.S. Nat. Mus.* viii. p. 112 (1886) [Costa Rica].

Adult male. Is readily distinguished from the adult male of *O. guttatus* by having the whole of the top of the head and crest rust-red, and the whole of the underparts strongly washed with reddish chestnut. Total length 9·5 inches, wing 5·7, tail 2·7, tarsus 1·65, middle toe and claw 1·7.

Adult female. Differs only from the male in having the head and crest rather browner. Total length 9·3 inches, wing 5·5, tail 2·5, tarsus 1·65, middle toe and claw 1·75.

Hab. Central America, ranging from Panama and Veragua to Costa Rica.

a. ♀ ad. sk.	Dota, Costa Rica, July (*J. Carmiol*).	Salvin-Godman Coll.
b, *c*. ♂ ad. sk.	Chiriqui (*Arcé*).	Salvin-Godman Coll.
d, *e*. ♂ ♀ ad. sk.	Southern slope, Volcan de Chiriqui (*Arcé*).	Salvin-Godman Coll.
f, *g*. ♀ ad. sk.	Veragua.	Gould Coll. (Types of the species.)
h. ♀ ad. sk.	Central America.	Purchased.

12. Odontophorus balliviani.

Odontophorus balliviani, *Gould*, *P. Z. S.* 1846, p. 69 [Bolivia]; *Gould*, *Monogr. Odontoph.* pt. iii. pl. 29 (1850); *Gray*, *List Gallinæ Brit. Mus.* p. 72 (1867); *id. Hand-l. B.* ii. p. 272 (1870); *Sclat. P. Z. S.* 1873, pp. 780, 784 [Huasampilla, Peru]; *Tacz. Orn. Pérou*, iii. p. 290 (1886).

Adult. Is easily distinguished from *O. veraguensis*, to which it is most nearly allied, by having the superciliary stripes, as well as the chin and a band on each side of the head below the ear-coverts, buff or rufous buff; a black band from the angle of the gape, passing below the eye and across the ear-coverts down each side of the neck; the crest dark chestnut; the general colour of the upper parts more rufous and much less heavily blotched with black;

the inner webs of the quills mottled with rufous; the throat blackish brown, with paler shafts, and the rest of the underparts dark chestnut, the diamond-shaped white black-edged spots being large and conspicuous, especially on the sides and flanks. Bill, legs, and feet lead-colour; iris hazel. Total length 10·5 inches, wing 5·8, tail 2·7, tarsus 1·8, middle toe and claw 2.

Hab. Peru and Bolivia.

a. Ad. sk.	Cocapata, Cocabamba, Bolivia.	T. C. Bridges, Esq. [C.]. (Type of the species.)
b. Ad. sk.	Huasampilla, Peru, March (*H. Whitely*).	Salvin-Godman Coll.

13. Odontophorus strophium.

Ortyx (Odontophorus) strophium, *Gould, P. Z. S.* 1843, p. 134 [Southern Countries of Mexico!].
Odontophorus strophium, *Gould, Monogr. Odontoph.* pt. i. pl. 31 (1844); *Gray, List Gallinæ Brit. Mus.* p. 72 (1867); *id. Hand-l. B.* ii .p. 272 (1870).
Strophiortyx strophium, *Bonap. C. R.* xlii. p. 883 (1856).

Adult male [?]. Top of the head deep brown; nape very deep chestnut; mantle reddish brown, with narrow whitish shaft-stripes: outer primaries uniform dark brown on both webs, otherwise the plumage of the upper parts is very similar to that of *O. guianensis* and the other previously described species; superciliary stripe, chin, and bands along the side of the throat mottled with black and white; a black band from the angle of the gape passes below the eye, across the ear-coverts, and down the sides of the neck; throat black, margined below by a wide white band across the fore part of the neck, which in turn is succeeded by a black band; the chest, breast, sides, and flanks rufous chestnut, shading into rufous buff on the middle of the belly, all the feathers with subterminal white shaft-spots. Total length 10·5 inches, wing 5·8, tail 2·5, tarsus 2, middle toe and claw 2·1.

The *immature bird* differs from the above in having the chest, breast, and underparts largely mixed with brownish grey, and the white spots represented only by a few narrow shaft-stripes on the sides of the chest and breast.

Hab. U.S. of Colombia.

a. Ad. sk.	[U.S. of Colombia.]	Gould Coll. (Type of species.)
b. Ad. sk.	Sta. Fé de Bogota.	E. Wilson, Esq. [P.].
c. Imm. sk.	Sta. Fé de Bogota.	Gould Coll.

14. Odontophorus columbianus.

Odontophorus columbianus, *Gould, P. Z. S.* 1850, p. 94 [Caracas]; *id. Monogr. Odontoph.* pt. iii. pl. 30 (1850).
Strophiortyx columbianus, *Bonap. C. R.* xlii. p. 883 (1856).

Adult. Head and upper parts very similar to those of *O. stro-*

phium, but the chin and throat are white, the feathers on the sides being tipped with black, the whole being bounded by black bands which commence at the angles of the gape, pass below the eyes, across the ear-coverts and down the sides of the throat, and unite in a wide band on the fore part of the neck; rest of the underparts reddish brown, each feather with a large diamond-shaped black-edged white shaft-spot. Bill black: feet lead-colour. Total length 11 inches, wing 5·7, tail 2·5, tarsus 1·85, middle toe and claw 2·05.

The *immature bird* has the mantle spotted and marked with black, the pale shafts very slightly developed, and the general tone of the underparts brownish grey, with only traces of white spots on the feathers of the chest, breast, and sides.

Hab. Venezuela.

a. Imm. sk. Venezuela (*Spence*). Salvin-Godman Coll.

59. RHYNCHORTYX.

Sexes similar? No distinct crest.

1st primary falls between the 8th and 9th: 4th longest.

Tail composed of 10 feathers, less than half the length of the wing.

Tarsus *longer* than the middle toe and claw.

Bill very stout.

Range. Central America; Veragua.

Key to the Species.

A. Superciliary stripe and sides of head bright rust-red; chest grey ..... *spodiostethus*, p. 443.
B. Superciliary stripe and sides of the head dull olive-brown; chest dark rufous ..... *cinctus*, p. 444.

1. Rhynchortyx spodiostethus.

Odontophorus spodiostethus, *Salvin, Ibis*, 1878, p. 447 [Veragua]; *Richmond, P. U.S. Nat. Mus.* xvi. p. 524 (1893) [Escondido R., Nicaragua, and Panama].

Adult. Top of the head and nape rusty brown; feathers of the mantle dark grey, edged with reddish brown; lower back and rump buff, thickly clouded and vermiculated with grey, and the median feathers with black shaft-stripes; scapulars and outer secondaries brown, shading into deep chestnut towards the margins, finely mottled on the outer web with buff and on the inner with black; inner webs with a black subterminal band and buff margin; rest of wing-coverts greyish brown, blotched with black towards the extremity of the inner web, and barred and mottled with buff; quills brown; secondaries blotched with rufous buff on the outer webs; lores, forehead, superciliary stripes, cheeks, ear-coverts.

and sides of the throat bright rust-red; middle of chin and throat white; front and sides of neck, chest, and sides of breast dark grey, shading into buff on the middle of the breast and belly; flanks indistinctly clouded with dusky and barred with black; under tail-coverts buff, barred with black; tail finely mottled with rufous and black. Total length 7·5 inches, wing 4·9, tail 1·8, tarsus 1·4, middle toe and claw 1·15.

In the type specimen the rump and upper tail-coverts are washed with vinaceous grey, and in both this and a second specimen the rufous and buff markings on the wing-coverts and scapulars are more strongly marked than in the bird described above, while a few of the feathers of the nape have white shaft-stripes or spots. These characters probably indicate that the birds are not yet in the most adult plumage.

Hab. Veragua and Panama.

a, *b*. [♂ ♀] Ad. sk.	Veragua.	Salvin-Godman Coll. (Types of the species.)
c. ♂ ad. sk.	Agua Dulce, Panama, Dec.	Gould Coll.

2. Rhynchortyx cinctus.

Odontophorus cinctus, *Salvin*, *Ibis*, 1876, p. 379 [Veragua]; *Rowley*, *Orn. Misc.* iii. p. 39, pl. lxxxvi. (1878).

Adult. Top of the head, mantle, chest, and sides of breast deep rufous; a white band from the lores to the eye, and continued behind the eye above the ear-coverts and along the sides of the neck; wings very similar to those of *R. spodiostethus*; in the type the lower back and rump are dark grey, finely mottled with whitish; but in a second example these parts are dull vinaceous, very slightly freckled with black, while a line of feathers down the centre have deep black shaft-stripes (these differences are due probably to either age or sex, but it is impossible to say which); upper tail-coverts reddish brown, vermiculated with black; superciliary stripe and sides of head dull olive-brown; ear-coverts blackish chestnut, chin and throat white; breast, belly, and flanks white, rather widely barred with black, except down the middle of the body; under tail-coverts buff, barred with black; tail-feathers reddish brown, vermiculated with black. Total length 7·5 inches, wing 4·6, tail 1·7, tarsus 1·3, middle toe and claw 1·15.

Hab. Veragua.

a, *b*. Ad. sk.	Veragua (*Arcé*).	Salvin-Godman Coll. (Types of the species.)

Suborder II. PERISTEROPODES.

Inner notch of the sternum less than half the length of the entire sternum.

The hallux is on the same level as the other toes, and its basal phalanx as long as that of the third toe.

Family I. MEGAPODIIDÆ.

Oil-gland nude.

Eggs deposited in the sand or in a mound raised by one or more pairs of birds; young hatched fully feathered, without the intervention of the parent bird, and able to fly almost from birth.

Key to the Genera.

A. Upper tail-coverts extend to the end of the tail ..... 3. LIPOA, p. 463.

B. Upper tail-coverts do not extend to the end of the tail.

a. Bill slender; claws very long and straight, the claw on the middle toe being much longer than the length of the culmen (measured from the tip to the posterior wall of the nasal opening); tail composed of 12 feathers.

a'. Secondaries as long as the primary quills ..... [p. 446. 1. MEGAPODIUS,

b'. Secondaries much shorter than the primary quills ..... 2. EULIPOA, p. 462.

b. Bill stout and strong; claws shorter and more rounded, the claw on the middle toe shorter than the length of the culmen (measured from the tip to the posterior wall of the nasal opening); tail composed of 16–18 feathers.

c'. Top of the head covered with feathers, which are sometimes very narrow and hair-like, never with either a casque or fleshy crest.

a''. No wattle at the base of the neck; tail shorter and rounded; nasal opening oval ..... [p. 464. 4. TALEGALLUS,

b''. A vascular wattle at the base of the neck; tail long and ∩-shaped; nasal opening round ..... [p. 467. 5. CATHETURUS,

d'. Top of the head with an elevated fleshy crest, extending from the base of the culmen to the middle of the crown; a pendulous wattle on the basal part of the fore neck; upper tail-coverts chestnut; nasal opening round ..... [p. 469. 6. AEPYPODIUS,

e'. Head covered with a large round occipital casque; fore part of tarsi reticulated with small hexagonal scales ..... [p. 471. 7. MEGACEPHALON,

1. MEGAPODIUS *.

Type.

Megapodius, *Quoy & Gaim. Voy. Uranie*, p. 125 (1824). M. freycineti.
Alecthelia, *Less. & Garn. Bull. Sci. Nat.* viii. p. 115 (1826) ..... M. freycineti.
Alechthelia, *Hartl.* (1842), *fide Gray, Hand-l. B.* ii. p. 255 (1870) ..... M. freycineti.
Amelous, *Glöger, Hand- u. Hilfsb.* p. 375 (1842) ..... M. freycineti.

In some species the head and neck are mostly feathered, while in others the whole head and neck with the exception of the occipital region and nape are almost entirely naked.

Nostrils oval.

Tail short and rounded, composed of 12 feathers.

Upper tail-coverts do not reach to the extremity of the tail-feathers.

1st primary is about equal to the 10th (sometimes a little longer or shorter); 5th somewhat the longest †.

Tarsi and feet very large and strong; fore part of tarsus covered with a single row of large scutes.

Range. Islands of the Pacific; north to the Philippine and Marianne Is., south to Australia, east to Ninafou, and west to the Nicobar Is.

Key to the Species.

A. No white on the basal part of the primaries.
  a. Mantle olive-brown or rufous brown, like the rest of the back ‡.
    a'. Underparts pale grey.
      a''. Outer webs of the outer primaries pale ochraceous ..... *nicobariensis*, p. 447.

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* Doubtful species :—

1. Megapodius, sp.

There are two quite young specimens in the British Museum, which are said to have been obtained on Lord Howe's Island. They differ from all other young of a similar age which I have examined in having the back and wings barred with *buff* and black, as well as by the paler colour of the underparts. They closely resemble the figure of the young of *M. laperousii* given by Finsch in the J. Mus. Godeffroy, viii. pl. v. fig. 3 (1875). So far as I am aware, no species of Megapode is known to occur on this island, and the probability is that these young birds represent an unknown species; but this cannot be decided till adult specimens are obtained.

a, b. Juv. sk. Lord Howe's Island.

2. Megapodius, sp.

Megapodius sp., *Cheeseman, Tr. & P. N. Zeal. Inst.* xxiii. p. 219 (1891) [formerly inhabited Sunday I., Kermadec Group].

3. ? Megapodius andersoni.

? Megapodius ? andersoni, *Gray, P. Z. S.* 1861, p. 291 [New Caledonia], 1864, p. 44.

G. R. Gray has given the above name to a bird from New Caledonia referred to in MS. by Anderson (who accompanied Cook's third Voyage) under the name of *Tetrao australis*, and briefly described by him as follows:—"Fusca nigraque; pedibus nudis."

† The fifth secondary is said to be absent in *Megapodius rubrifrons* (=*M. eremita*). See Sclat. Ibis, 1890, p. 81.

‡ A slight tinge of grey on the upper mantle in one specimen of *M. tenimberensis*.

b''. Outer webs of the outer primaries pale brown ..... *tenimberensis*, p. 448.
b'. Underparts dark grey ..... *cumingi*, p. 449.
c'. Underparts dark brown..... *sanghirensis*, p. 450.
d'. Underparts rufous brown..... *bernsteini*, p. 450.
b. Mantle grey or dark grey, forming a distinct contrast with the coloration of the rest of the upper parts.
e'. Legs dark (olive-brown or dark olive).
c''. Feathers on the forehead extending to the base of the culmen.
a^3. Belly brownish grey ..... *forsteni*, p. 451.
b^3. Belly brown ..... *brunneiventris*, p. 452.
d''. Forehead naked with the exception of a few minute plumes ..... *eremita*, p. 452.
f'. Legs orange-red.
e''. Flanks blackish grey..... *macgillivrayi*, p. 453.
f''. Flanks dark chestnut ..... *duperreyi*, p. 454.
c. Mantle and general colour of upper parts blackish grey,
g'. Head blackish grey, like the rest of the upper parts.
g''. Legs black..... *freycineti*, p. 457.
h''. Legs yellow or red.
c^3. Fore part of the head feathered .... *geelvinkianus*, p. 459.
d^3. Fore part of the head naked ..... *layardi*, p. 459.
h'. Head French grey..... *laperousii*, p. 460.
B. Basal part of the primaries white ..... *pritchardi*, p. 461.

1. Megapodius nicobariensis.

Megapodius nicobariensis, *Blyth, J. As. Soc. Beng.* xv. pp. 52, 372 (1846) [Nicobar I.]; *id. Cat. Mus. As. Soc.* p. 239 (1849); *Gray, P. Z. S.* 1861, p. 290, 1864, p. 43; *v. Pelz. Reise Novara, Vög.* p. 110, pls. iv. & vi. fig. 12 [egg] (1865); *Ball, J. As. Soc. Beng.* xxxix. p. 32 (1870); *id. Str. F.* i. p. 82 (1873) [Nicobars]; *Hume, Str. F.* i. p. 313 (1873); *id. Str. F.* ii. pp. 71, 276 [Great Cocos ?], p. 499 (1874); *Hume & Marsh. Game B. Ind.* i. p. 119, pl. (1878), iii. App. p. 428, pl. ii. (1880); *Oustal. Ann. Sci. Nat.* xi. p. 129 (1881); *Oates, ed. Hume's Nests & Eggs*, iii. p. 449 (1890).
Megapodius trinkutensis, *Sharpe, Ann. Mag. N. H.* (4) xiii. p. 448 (1874) [Trinkut, Nicobars]; *Walden, Ann. Mag. N. H.* (4) xiv. p. 163 (1874) [Nangcowry, Camorta, Katschal, and Trinkut Is., Nicobars]; *Hume, Str. F.* ii. p. 499 (1874).

Adult male and female *. Top of the head reddish or olive-brown; sides of the crown from behind the eyes, the occiput, and

* Some specimens, as has been already remarked by Tweeddale (Ann Mag. N. H. (4) xiv. p. 163, 1874), have a curious tendency to lose the feathers on the crown and assume a naked callosity. In a female adult from Nangcowry I. the crown is entirely naked and covered with a thick black-looking skin, which appears almost of the nature of a scab; the same peculiarity is equally developed in an immature male from Camorta; while in three other specimens (both adult and immature) the crown is partially denuded and the skin is of the same black colour. In all the other specimens the skin of the top of the head is red.
I am of opinion that the naked head in the above-mentioned specimens is abnormal, and possibly caused by disease.

sides of the head behind the ears pale French grey; rest of the upper parts dull olive-brown, brighter on the wing-coverts and outer webs of the quills; chest grey washed with brown, shading into pure grey on the breast and belly. Bill light greenish or yellowish, yellower along the edge of the mandibles; naked skin on the head and neck varying from dull cherry-red to bright brick-red; iris brown; front of tarsus dark or sometimes greenish-horn colour; toes darker; soles pale flesh or pale yellow; tibio-tarsal joint and back and sides of tarsus dull red. Total length 14·5 inches, wing 9·2, tail 2·9, tarsus 2·7.

In less mature examples the chin and throat are partially covered with small whitish-grey feathers, and the neck is entirely covered with feathers; the whole of the rest of the underparts are brown or rufous brown.

Hab. Nicobar Islands.

a. Imm. sk.	[Port Blair, S. Andaman.]	Hume Coll.
b–g. ♂ ♀ ad., imm., et pull. sk.	Nicobar Is., April & August (*R. J. Wimberley and F. A. de Roepstorff*).	Hume & Tweeddale Colls.
h. Imm. sk.	Tillangchong, Nicobars, Mar. (*V. Ball*).	Hume Coll.
i, k. ♂ vix ad. sk.	Bompoka I., Jan. (*W. Davison*).	Hume Coll.
l–t. ♂ ♀ ad., imm., et pull. sk.	Camorta I., Jan.–March (*R. J. W. & W. D.*)	Hume & Tweeddale Colls.
u, v. ♀ ad. et ♂ imm. sk.	Camorta I., Jan., Dec. (*R. J. W.*).	Dr. Bowdler Sharpe [P.].
w–d'. ♂ ♀ ad. et imm. sk.	Trinkut I., Jan.–March (*R. J. W., W. D., & F. A. de R.*).	Hume & Tweeddale Colls.
e'. Imm. sk.	Trinkut I. (Type of *M. trinkutensis*, Sharpe.)	Dr. Sharpey [P.].
f'–k'. ♂ ♀ ad. et imm. sk.	Katschal I., Feb. (*R. J. W., W. D., & F. A. de R.*).	Hume & Tweeddale Colls.
l'–q'. ♂ ♀ ad. et imm. sk.	Nangcowry I., Jan., Feb., May (*R. J. W.*).	Hume & Tweeddale Colls.
r', s'. ♂ vix ad. et ♀ imm. sk.	Treis I., March (*W. D.*).	Hume Coll.

2. Megapodius tenimberensis.

Megapodius tenimberensis, *Sclat. P. Z. S.* 1883, p. 57 (Loetoer, N. of Yamdena and Firinun I., Tenimber Group]; *Salvad. Aggiunte Orn. Pap.* pt. iii. p. 194 (1891).

Adult male. Most nearly resembles *M. nicobariensis*, but the upper part of the mantle is slightly washed with grey, in this respect showing an approach to *M. duperreyi*, and the sides of the head, chin, and throat are also more thickly covered with small feathers. Bill pale yellow; iris dark brown; legs in front black, but the tibio-tarsal joint and back of the legs are red; feet black. (In the second specimen both the legs and feet are said to be red.) Total length 14 inches, wing 9·6, tail 3·5, tarsus 2·9.

Hab. Tenimber Group.

a. ♂ ad. sk.	Loetoer, N. of Yamdena, Tenimber Group, Sept. (*H. O. Forbes*).	Tweeddale Coll.	(Types of the species.)
b. ♂ ad. sk.	Firinun I., Tenimber Group, Sept.	H. O. Forbes, Esq. [C.].	

3. Megapodius cumingi.

Megapodius rubripes, *Wagler, Isis*, 1829, p. 737 [part. Celebes].

Megapodius rufipes (sic), *Gray* (*nec Wagl.*), *List of B.* pt. iii. *Gall.* p. 21 (1844) [Luzon].

Megapodius cumingii, *Dillwyn, P. Z. S.* 1851, p. 118, pl. 39 [Labuan]; *Motley & Dillwyn, Contr. N. H. Labuan*, p. 32, pl. 7 (1855); *Gray, P. Z. S.* 1861, p. 290 [Luzon, Labuan], 1864, p. 43; *v. Martens, J. f. O.* 1866, p. 26 [Mindanao, Mindoro]; *Schl. Ned. Tijdschr. Dierk.* iii. p. 263 (1866); *Gray, List Gallinæ Brit. Mus.* p. 21 (1867); *id. Hand-l. B.* ii. p. 255 (1870); *Walden, Trans. Zool. Soc.* viii. p. 29 (1872); *Salvad. Ucc. Borneo*, p. 302 (1874); *Walden, Trans. Zool. Soc.* ix. pp. 225, 251 (1875); *Tweedd. P. Z. S.* 1878, p. 624 [Palawan]; *Sharpe, Ibis*, 1879, p. 267 [Brunei]; *id. P. Z. S.* 1879, p. 349 [Labuan, Kuraman, Daat], 1881, p. 800 [Sandakan]; *id. Ibis*, 1884, p. 322 [S. Palawan]; *Oustal. Ann. Sci. Nat.* xi. p. 111 (1881); *Whitehead, Ibis*, 1888, p. 411; *Sharpe, Ibis*, 1888, p. 203; *Blasius, Ornis*, 1888, p. 317 [Palawan]; *Everett, P. Z. S.* 1889, p. 225; *id. J. As. Soc. Str. Br.* p. 197 (1889) [Balabac, Marasi Bay, Taguso]; *Sharpe, Ibis*, 1890, p. 141 [Pulo Tega, N. Borneo].

Megapodius gilbertii, *Gray, P. Z. S.* 1861, p. 289 [Celebes], 1864, p. 43; *id. Hand-l. B.* ii. p. 255 (1870); *Walden, Trans. Zool. Soc.* viii. p. 87 (1872); *Meyer, Ibis*, 1879, p. 138 [N. Celebes]; *Oustal. Ann. Sci. Nat.* xi. p. 107 (1881); *Guillem. P. Z. S.* 1885, p. 559 [N. Celebes].

Megapodius lowi, *Sharpe, P. Z. S.* 1875, p. 111 [Labuan].

Megapodius pusillus, *Tweedd. P. Z. S.* 1877, p. 765, pl. lxxviii. [Zebu] (Juv.).

Megapodius dillwyni, *Tweedd. P. Z. S.* 1877, p. 766 [Philippine Is.], 1878, p. 953 [Zamboanga], 1879, p. 73 [Basilan]; *Oustal. Ann. Sci. Nat.* xi. p. 118 (1881).

Megapodius dillwini, *Steere, List Birds & Mamm. Philippines*, p. 25 (1890) [Mindanao, Basilan, Masbate, Marinduque].

Adult male and female. Differ chiefly from *M. nicobariensis* in having the whole of the plumago darker, especially the grey surrounding the crown and of the underparts. Specimens differ considerably *inter se* in the colour of the upper parts, even in those from the same locality—some being olive-brown, others rufescent olive-brown. Bill horn-yellow; skin of the orbital, loral, and auricular regions washed with red; iris warm brown; legs (in the male) reddish, brighter than in the female; the tarsal scutella and feet dark olivaceous brown. Total length 15 inches, wing 9, tail 3, tarsus 2·7.

Hab. Philippine Islands, ranging south to Palawan and the small islands of the north coast of Borneo, also to the Sulu Islands, Celebes, and Tojian I.

a. Pull. st.	Philippine Is.	Purchased of M. Vereaux.
b–d. Ad. st. et sk.	Luzon, Philippine Is.	Cuming Coll.
. Ad. sk.	Luzon (*Maitland Heriot*).	Tweeddale Coll.
f. ♂ imm. sk.	Cebu, March (*A. H. Everett*).	Tweeddale Coll. (Type of *M. pusillus*, Tweedd.)
g–i. ♂ ad. et ♀ imm. sk.	Zamboanga, Mindanao, March, May (*A. H. E.*).	Tweeddale Coll.
k. ♀ imm. sk.	Basilan, June (*A. H. E.*).	Tweeddale Coll.
l–t. ♂ ♀ ad. sk.	Palawan, Jan. (*A. H. E.*).	Tweeddale Coll.
u. Ad. sk.	Palawan (*Lemprière*).	Dr. R. Bowdler Sharpe [P.].
v. Ad. sk.	Banguey I., N. Borneo.	A. H. Everett, Esq. [C.].
w. Imm. sk.	Omadal I., April.	Dr. M'Kinlay [C.].
x. Pull. sk.	Balabac I.	Dr. R. Bowdler Sharpe [P.].
y. Ad. sk.	Labuan.	Tweeddale Coll.
z–c'. Ad. et pull. sk.	Labuan (*H. Low*).	Dr. R. Bowdler Sharpe [P.]. (Types of *M. lowii*, Sharpe.)
d'. Ad. sk.	Kuruman I.	H. Veitch, Esq. [P.].
e'. Pull. sk.	Tega I., April.	A. H. Everett, Esq. [C.].
f', g'. ♀ vix ad. sk.	Menado, N. Celebes.	A. R. Wallace, Esq. [C.]. (Types of *M. gilbertii*, Gray.)
h'. Pull. sk.	Celebes.	Tweeddale Coll.
i'. ♀ vix ad. sk.	Tojian I. (*A. B. Meyer*).	Tweeddale Coll.

4. Megapodius sanghirensis.

Megapodius sanghirensis, *Schl. Notes Leyd. Mus.* ii. p. 91 (1880) [Siao and Sanghir Is.]; *Oustal. Ann. Sci. Nat.* xi. p. 110 (1881); *Blasius, Ornis*, 1888, p. 626.

Adult. Most nearly allied to *M. cumingi*, from which it differs in having the upper parts dark chestnut-brown without any olive shade and the underparts dark brown; in this respect it approaches *M. bernsteini*, and reminds one of immature specimens of *M. nicobariensis*, but the colour is much darker. (*Mus. Lugd.*) Total length 14 inches, wing 9, tail 3, tarsus 2·5.

Hab. Sanghir Is.

5. Megapodius bernsteini.

Megapodius bernsteinii, *Schl. Ned. Tijdschr. Dierk.* iii. p. 261 (1866) [Sula]; *Gray, Hand-l. B.* ii. p. 255 (1870); *Oustal. Ann. Sci. Nat.* xi. p. 137 (1881).

Adult. Upper parts very similar to those of *M. cumingi*, but the cheeks and neck are more thickly covered with small feathers, and the outer webs of the primaries and secondaries are more strongly washed with rufous, while the lower back, rump, and upper tail-coverts are dark brownish chestnut, and the tail is brownish black; the chest is olive-brown, gradually shading into rufescent brown on

tho lower breast, belly, and flanks: bill horn-colour, legs reddish. Total length 12 inches, wing 7·5, tail 2·3, tarsus 2·5.

Hab. Sula Is.

a. Ad. sk.		Sula Islands.	Purchased.

6. Megapodius forsteni.

Megapodius forstenii, *Temm., Gray, Gen. B.* iii. p. 491, pl. 124 (1847); *Gray, P. Z. S.* 1860, p. 362 [Amboina], 1861, p. 289 [Ceram, Banda?]; *Reichenb. Tauben*, pp. 4, 190, pl. 271. fig. 2496 (1862); *Wallace, P. Z. S.* 1863, p. 34; *Gray, P. Z. S.* 1864, p. 43 [Boeroe]; *Finsch, Neu-Guin.* p. 180 (1865) [Celebes!]; *Schl. Ned. Tijdschr. Dierk.* iii. p. 263 (1866) [Harouko or Ema]; *Gray, List Gallinæ Brit. Mus.* p. 19 (1867); *id. Hand-l. B.* ii. p. 255 (1870); *Salvad. Ann. Mus. Civ. Genov.* viii. p. 383 (1876); *Cab. & Reichenow, J. f. O.* 1876, p. 326; *Rosenb. Malay. Archip.* p. 373 (1878–79) [Goram]; *Sch. Mus. Pays-Bas*, viii. p. 70 (1880); *Oustal. Ann. Sci. Nat.* xi. p. 99 (1881); *Salvad. Ann. Mus. Civ. Genov.* xviii. p. 7 (1882); *id. Orn. Pap.* iii. p. 235 (1882); *Blasius, P. Z. S.* 1882, p. 710 [Ceram]; *Blas. & Nehrk. Verh. Ges. Wien*, xxxii. p. 430 (1882) [Amboina; egg]; *Salvad. Aggiunte Orn. Pap.* pt. iii. p. 194 (1891).

Megapodius sp., *Rosenb. Reis naar Zuidoostereil*, p. 100 (1867) [Goram].

Megapodius wallacei, *Gray, List Gallinæ Brit. Mus.* p. 21 (1867) [part. juv. from Boeroe].

Megapodius affinis, *Meyer, SB. Ak. Wien.* lxix. p. 215 (1874) [Rubi, New Guinea]; *Salvad. Ann. Mus. Civ. Genov.* viii. p. 406 (1876) [Jobi], x. p. 163 (1877) [Sorong]; *id. Atti Ac. Tor.* xiii. p. 312 (1877); *D'Alb. Nuova Guin.* p. 582 (1880); *Oustal. Ann. Sci. Nat.* xi. p. 95 (1881); *Salvad. Ann. Mus. Civ. Genov.* xviii. p. 7 (1882); *id. Orn. Pap.* iii. p. 237 (1882).

Megapodius decollatus, *Oustal. Bull. Assoc. Sci. Fr.* xxi. p. 248 (1878) [d'Urville I.].

Megapodius duperreyi, *Schl. Mus. Pays-Bas*, viii. p. 62 (1880) [part. Jobi I.].

Megapodius affinis, var. jobiensis, *Schl. Mus. Lugd.* (*fide Oustal. Ann. Sci. Nat.* xi. p. 95 (1881)).

Adult. Very similar to *M. eremita*, but is easily distinguished by the feathering on the forehead being continued to the base of the culmen, the feathers of the occiput more elongate and forming a short but distinct crest, while the olive-brown of the upper parts is somewhat lighter. "Bill yellowish, above nostrils black; feet dusky yellowish olive, tibia beneath dull yellow, claws black; iris reddish brown, skin of face and throat red" (*Wallace*). Total length 14·5 inches, wing 8·2 to 8·9, tail 2·6 to 3, tarsus 2·6 to 2·8.

Hab. Boeroe, Amboina, Ceram, and Goram, ranging north to Western New Guinea, Jobi I., and d'Urville I., off the north coast of New Guinea.

a–c. Ad. et juv. sk.	Boeroe.	A. R. Wallace, Esq. [C.].
d. Ad. sk.	Amboina.	A. R. Wallace, Esq. [C.].
e, f. Ad. sk.	Ceram.	A. R. Wallace, Esq. [C.].

7. Megapodius brunneiventris.

Megapodius brunneiventris, *Meyer*, *Abh. Zool. Mus. Dresd.* 1890–91, no. 4, p. 15 (1892) [Astrolabe Bay, E. New Guinea].

Adult. Said to resemble *M. forsteni*, but the belly is brown and the top of the head covered with a well-developed olive-brown crest, the greater wing-coverts being of the same colour.

I consider this species to be very doubtfully distinct from *M. forsteni*; it is probably founded on an immature specimen.

Hab. Astrolabe Bay, New Guinea.

8. Megapodius eremita.

Megapodius eremita, *Hartl. P. Z. S.* 1867, p. 830 [Bougainville I.]; *Sclat. P. Z. S.* 1878, pp. 289, 290, 671, 673 [New Ireland]: *Finsch*, *P. Z. S.* 1879, p. 14 [Duke of York I.]; *Schl. Mus. Pays-Bas*, viii. p. 65 (1880); *Sclat. Voy. Challenger*, p. 32, pl. xi. (1880) [Pigeon I., Admiralty Group]; *Layard, Ibis*, 1880, pp. 303, 308 [Blanche Bay, New Britain]; *Finsch*, *Ibis*, 1881, p. 539 [New Britain]; *Oustal. Ann. Sci. Nat.* xi. p. 103 (1881); *Salvad. Ann. Mus. Civ. Genov.* xviii. p. 7 (1882); *id. Orn. Pap.* iii. p. 238 (1882); *Finsch*, *Vög. d. Südsee*, p. 20 (1884) [New Britain]; *Studer, in Forschungsreise S.M.S. 'Gazelle,'* iii. p. 253, pl. xii. (1889); *Meyer*, *Ibis*, 1890, p. 423 [eggs]; *Salvad. Aggiunte Orn. Pap.* pt. iii. p. 194 (1891).

Megapodius brenchleyi, *Gray*, *Ann. Mag. N. H.* (4) v. p. 328 (1870) [Gulf I. and San Christoval, Solomon Group]; *id. Hand-l. B.* ii. p. 255 (1870); *id. Cruise Curaçoa*, p. 392, pl. 20 (1873); *Ramsay*, *P. Linn. Soc. N.S.W.* iv. p. 75 (1879) [Savo, Solomon Is.]; *Schl. Mus. Pays-Bas*, viii. p. 65 (1880); *Oustal. Ann. Sci. Nat.* xi. p. 105 (1881); *Brazier*, *P. Linn. Soc. N.S.W.* vi. p. 150 (1881); *Salvad. Ann. Mus. Civ. Genov.* xviii. p. 7 (1882); *id. Orn. Pap.* iii. pp. 240, 564 (1882); *Tristram*, *Ibis*, 1882, p. 144; *Ramsay*, *P. Linn. Soc. N.S.W.* vii. p. 39 (1882) [Solomon Is.]; *Kissack*, *P. R. Soc. Queensl.* i. p. 181 (1885); *Sharpe in Gould's B. New Guin.* pt. xxii. pl. xi. (1886); *Grant*, *P. Z. S.* 1887, p. 332 [Alu, Shortland I.], 1888, pp. 187, 201 [Guadalcanar]; *Woodford*, *P. Z. S.* 1888, p. 249; *id. Nat. among Head-hunters*, p. 100 (1890) [Savo]; *Meyer*, *Ibis*, 1890, p. 423; *Salvad. Aggiunte Orn. Pap.* pt. iii. p. 194 (1891).

Megapodius sp., *Brazier*, *P. Z. S.* 1874, p. 606 [Savu, Treasury I., New Britain]; *Ramsay*, *P. Linn. Soc. N.S.W.* i. p. 375 (1876), ii. p. 112 (1878) [Kera I., Solomon Group].

Megapodius hueskeri, *Cab. & Reichenow*, *J. f. O.* 1876, p. 326 [New Hanover]; *Sclat. P. Z. S.* 1877, p. 113 [Duke of York I.].

Megapodius rubrifrons, *Sclat. P. Z. S.* 1877, p. 556 [Pigeon I., Admiralty Group].

Megapodius macgillivrayi?, *Ramsay* (*nec Gray*), *P. Linn. Soc. N.S.W.* ii. p. 112 (1877) [egg from New Ireland]; *Oustal. Ann. Sci. Nat.* xi. p. 52 (1881) [egg from New Ireland].

Adult male and female. Mantle dark grey; top of the head and rest of upper parts dark olive-brown; lower back, rump, and upper tail-coverts washed with dark chestnut; chest and rest of underparts dark grey, shading into brownish grey on the belly and thighs;

naked skin on the fore part and sides of the head and neck red. Bill yellow, dusky at the base; iris reddish brown; legs black, olive-brown or olive; feet black. Total length 15 inches, wing 8·8 to 9·2, tail 2·5 to 3, tarsus 2·6 to 2·8.

Specimens differ somewhat in size, an adult male from the Admiralty Islands in the north being somewhat smaller than those from Guadalcanar and San Christoval in the south of the Solomon group.

Hab. Admiralty Is., New Hanover, New Ireland, Duke of York I., New Britain, and the Solomon Islands.

a. ♂ ad. sk.	Pigeon I., Admiralty Group.	'Challenger' Exp. (Type of *M. rubrifrons*, Scl.)
b–d. Ad. et juv. sk.	New Ireland.	Rev. G. Brown [C.].
e. Ad. sk.	New Ireland (*Rev. G. Brown*).	Tweeddale Coll.
f, *g*. ♂ ♀ ad. sk.	Duke of York I., Oct., Dec. (*T. Kleinschmidt*).	Dr. R. Bowdler Sharpe [P.].
h. Juv. sk.	New Britain, Aug. (*O. Finsch*).	Tweeddale Coll.
i. ♀ ad. sk.	Alu, Shortland I.	C. M. Woodford, Esq. [C.].
k. Juv. sk.	Gulf I., Solomon Group, Sept.	J. Brenchley, Esq. [P.]. (Type of *M. brenchleyi*, Gray.).
l. ♀ ad. sk.	San Christoval.	Reginald Tupper, Esq. [P.].
m, *n*. ♀ ad. et juv. sk.	San Christoval, Jan. (*J. Macgillivray*).	Voyage of H.M.S. 'Herald.'

9. Megapodius macgillivrayi.

Megapodius duperreyii, *Macgill.* (*nec Less.*) *Voy.* '*Rattlesnake*,' i. p. 195, ii. p. 63 (1852): *Ramsay*, *P. Linn. Soc. N.S. W.* iv. p. 101 (1879) [part.]; *Oustal. Ann. Sci. Nat.* xi. p. 77 (1881) [part.].

Megapodius macgillivrayi, *Gray*, *P. Z. S.* 1861, p. 289, 1864, p. 43 [Duchateau and Pig Is., Louisiade Arch.]; *Reichenb. Tauben*, p. 190 (1862); *Schl. Ned. Tijdschr. Dierk.* iii. p. 261 (1866); *Gray*, *List Gallinæ Brit. Mus.* p. 19 (1867); *id. Hand-l. B.* ii. p. 255 (1870); *Schl. Mus. Pays-Bas*, viii. p. 65 (1880); *Salvad. Ann. Mus. Civ. Genov.* xviii. p. 6 (1882); *id. Orn. Pap.* iii. p. 225 (1882); *id. Aggiunte Orn. Pap.* pt. iii. p. 194 (1891).

Megapodius macgillivrai, *Selat. P. Z. S.* 1876, p. 460, pl. xliii. [shores of Huon Gulf].

Adult male and female. Closely resemble *M. eremita*, from which they may be at once distinguished by the colour of the legs, which are apparently orange-red like those of *M. duperreyi*; the naked skin on the forehead and round the eye appears to have been dark purplish black, not red; while the occipital feathers are elongate, and form a short thick crest as in *M. forsteni*. Total length 13·5 inches, wing 8·5–8·9, tail 3–3·2, tarsus 2·3–2·7.

Hab. Louisiade Archipelago, extending to the shores of Huon Gulf and the Astrolabe Mountains.

a. ♂ ad. sk.	Duchateau Is., Louisiade Arch. (*J. Macgillivray*).	Voy. of H.M.S. 'Rattlesnake.' (Type of the species.)

b. Ad. st.	Louisiade Arch. ?	Purchased of M. Verreaux.
c. Ad. sk.	Astrolabe Mts.	A. Goldie, Esq. [C.].
d. Ad. sk.	Huon Gulf, May (*Dr. Comrie*).	Tweeddale Coll.

10. Megapodius duperreyi.

Megapodius duperreyii, *Less. & Garn. Bull. Sci. Nat.* viii. p. 113 (1826) [Dorey, New Guinea]; *Less. Voy. Coquille,* i. pt. ii. p. 700, pl. 36 (1828) [New Guinea]; *id. Man. d'Orn.* ii. p. 223 (1828); *Wagl. Isis,* 1829, p. 737; *Less. Traité d'Orn.* p. 478, pl. 87. fig. 1 (1831); *id. Compl. de Buff., Ois.* p. 256, pl. 10. fig. 1 (1840); *Müll. Verh. Land- en Volkenk.* p. 109 (1839–44); *Sclat. Journ. P. Linn. Soc.* ii. p. 169 (1858); *Gray, P. Z. S.* 1858, p. 196 [Aroe Is.]; *id. Cat. B. New Guin.* p. 61 (1859); *Reichenb. Tauben,* p. 3, pl. 275. fig. 1530 (1862); *Rosenb. J. f. O.* 1864, p. 135; *Schl. Ned. Tijdschr. Dierk.* iii. p. 260 (1866); *Salvad. & D'Alb. Ann. Mus. Civ. Genov.* vii. p. 838 (1875) [Yule Is., S.E. New Guinea]; *Salvad. Ann. Mus. Civ. Genov.* ix. p. 47 (1876); *Ramsay, P. Linn. Soc. N.S.W.* i. p. 394 (1876) [Port Moresby]; *D'Alb. Ann. Mus. Civ. Genov.* x. p. 20 (1877) [Fly R.]; *Salvad. Ann. Mus. Civ. Genov.* x. p. 162 (1877) [Andai, Sorong]; *id. P. Z. S.* 1878, p. 100 [Wokan, Aroe Is.]; *Ramsay, P. Linn. Soc. N.S.W.* iii. p. 116 [Hall Sound, Yule I.], p. 295 [Laloki R.] (1878), iv. p. 101 (1879); *Rosenb. Malay. Arch.* p. 562 (1878–79); *D'Alb. & Salvad. Ann. Mus. Civ. Genov.* xiv. p. 127 (1879); *Salvad. Ann. Mus. Civ. Genov.* xiv. p. 665 (1879); *D'Alb. Nuov. Guin.* pp. 184, 582, 585, 588 (1880); *Schl. Mus. Pays-Bas,* viii. p. 57 (1880) [Wetter; Poulo-Ai; Banda; Wammer; Wonoumbai and Trangan; Aroe; Triton Bay, W. New Guinea]; *Salvad. Voy. Chall., Birds,* p. 83 (1880); *Oustal. Ann. Sci. Nat.* xi. p. 77 (1881); *Meyer, Verh. Ges. Wien,* xxxi. p. 767 (1881) [Sumba, Solor]; *Sharpe, J. Linn. Soc.* xvi. p. 447 (1882) [Sogeri]; *Salvad. Ann. Mus. Civ. Genov.* xviii. p. 6 (1882); *id. Orn. Pap.* iii. p. 220 (1882); *Meyer, Zeit. ges. Orn.* i. p. 224 (1884) [Dobbo, Aroe Is.]; *Sharpe, Rep. 'Alert,' Birds,* p. 26 (1884); *Guillem. P. Z. S.* 1885, p. 663 [Dorey, New Guinea]; *Salvad. Ann. Mus. Civ. Genov.* (2) ix. p. 590 (1890) [Rigo]; *id. Aggiunte Orn. Pap.* p. 194 (1891).

Megapodius rubripes, *Temm. Pl. Col.* v. pl. 46 [no. 411] (1826) [Celebes! Amboina!]; *Less. Man. d'Orn.* ii. p. 222 (1828); *Wagler, Isis,* 1829, p. 737; *Less. Traité d'Orn.* p. 479 (1831); *id. Comp. de Buff., Ois.* p. 256, pl. 9. fig. 1 (1840); *Gray, Gen. B.* iii. p. 491 (1847); *Sclat. J. Pr. Linn. Soc.* ii. p. 169 (1858) [New Guinea, Celebes!]; *Gray, P. Z. S.* 1858, p. 196; *id. Cat. B. New Guin.* pp. 50, 61 (1859); *id. P. Z. S.* 1861, p. 438 [New Guinea]; *Reichenb. Tauben,* p. 5, pl. 276. fig. 1533 (1862); *Rosenb. Nat. Tijdschr. Ned. Ind.* xxv. p. 252 [Ceram! Amboina!]; *id. J. f. O.* 1864, p. 135; *Gray, P. Z. S.* 1864, p. 43 [Amboina!]; *Finsch, Neu-Guin.* p. 180 (1865) [Waigiou! Celebes!]; *Gray, List Gallinæ Brit. Mus.* p. 21 (1867) [Amboina!]; *id. Hand-l. B.* ii p. 255 (1870); *Rosenb. Malay. Arch.* p. 323 (1878–79).

Megapodius reinwardtii, *Wagler, Syst. Av. Addit.* Megapodius, p. 378, sp. 4 (1827); *id. Isis,* 1829, p. 736; *Gray, Gen. B.* iii. p. 491 (1847); *id. P. Z. S.* 1858, p. 187 [Kei and Aroe Is.]; *id. Cat. B. New Guin.* p. 50 (1859) [Dorey, New Guinea]; *id. P. Z. S.*

1859, p. 159 [Dorey, New Guinea], 1861, pp. 290, 438, pl. xxxiii. (juv.); *Reichenb. Tauben*, p. 190 (1862); *Wallace, P. Z. S.* 1863, p. 487 [Lombock and Floris]; *Gray, P. Z. S.* 1864, p. 43; *id. List Gallinæ Brit. Mus.* p. 20 (1867); *Rosenb. Reis naar Zuidoostereil*, p. 50 [Maikor, Aroe Is.], p. 82 [Doela, Kei Is.] (1867); *Gray, Hand-l. B.* ii. p. 255 (1870); *Meyer, SB. Ak. Wien*, lxix. pp. 87, 214 (1874); *Rosenb. Malay. Archip.* p. 372 (1878–79).

Megapodius tumulus, *Gould, P. Z. S.* 1842, p. 20; *id. B. Austr.* v. pt. vi. pl. 79 (1842); *Gray, P. Z. S.* 1861, p. 290, pl. xxxiv. [N. Australia; Islands in Endeavour and Torres Straits]; *id. P. Z. S.* 1864, p. 43 [Cairncross I.]; *Gould, Handb. B. Austr.* ii. p. 167 (1865); *Finsch, Neu-Guin.* p. 180 (1865); *Ramsay, Ibis*, 1865, p. 86, 1866, p. 325 [Port Denison]; *Gray, Hand-l. B.* ii. p. 255 (1870); *Ramsay, P. Z. S.* 1876, pp. 117, 118 [N. Queensland]; *Diggles, B. Austr.* ii. p. & pl. 94 (1877); *Forbes, P. Z. S.* 1878, p. 126 [Cape York]; *Ramsay, Tab. List Austr. B.* p. 18 (1888); *Lumholtz, Among Cannibals*, p. 149, woodcut (1889); *North, Nests & E. Austr. B.* p. 282 (1889).

Megapodius rufipes, *Müll. Land- en Volkenk.* pp. 23, 109 (1839–44) [R. Utanata, W. New Guinea]; *Rosenb. Reist. naar Geelwinkb.* p. 84 (1875).

Alecthelia urvillei, *Wallace* (*nec Less.*), *Ann. Mag. N. H.* (2) xx. p. 478 (1857).

Megapodius sp., *Wallace, Ann. Mag. N. H.* (2) xx. pp. 473, 477 (1857) [juv.] [Kei and Aroe Is.].

Megapodius gouldii, *Gray, P. Z. S.* 1861, p. 290 [Lombock], 1864, p. 43 [Floris]; *id. Hand-l. B.* ii. p. 255 (1870).

Megapodius amboinensis, *Gray, P. Z. S.* 1861, p. 293 [Banda].

Megapodius duperrei, *Rosenb. Nat. Tijdschr. Ned. Ind.* xxv. p. 252 (1863) [Salawatti]; *Vorderm. Nat. Tijdschr. Ned. Ind.* l. p. 520 (1890) [Kangeang Arch.].

Megapodius maegilivrayi, *Finsch, Neu-Guin.* p. 180 (1865) [Port Essington].

Megapodius assimilis, *Masters, P. Linn. Soc. N.S. W.* i. p. 59 (1887) [Dungeness and Bet Is., Torres Straits]; *Ramsay, P. Linn. Soc. N.S.W.* ii. p. 196 (1877); *id. Tabl. List Austr. B.* p. 18 (1888).

Megapodius sp., *Vorderm. Nat. Tijdschr. Ned. Ind.* xlix. p. 71 (1889) [Kangeang Arch.].

After carefully examining a large series of specimens from Lombock, Floris, Kei, and Aroe Islands, also New Guinea and Australia, I have arrived at the same conclusions as Oustalet, who was the first to recognize that the birds inhabiting these islands were not specifically distinct from one another. If we compare the more lightly coloured birds from Floris and Lombock (*M. gouldii*, Gray) with the much darker specimens from Western Australia (*M. tumulus*, Gould), the difference between the two is no doubt considerable both in colour and size, though the latter is of little or no importance, but the Lombock birds cannot be distinguished from some specimens from Kei and Aroe Islands, while other specimens from the latter localities are undistinguishable from New Guinea and Australian examples. It is therefore impossible

to recognize more than one species, as the chain of intermediate forms between the extreme types is complete.

Adult male and female. Top of the head with a full occipital crest of brown feathers; back of the neck and mantle grey, shading into rufescent olive-brown on the middle of the back and wings; lower back, rump, and upper tail-coverts dark chestnut; tail blackish chestnut; chin, throat, and underparts smoky grey; sides, flanks, thighs, and under tail-coverts mostly dull chestnut. Bill reddish brown, with yellow edges; iris dark brown; legs and feet bright orange; toes dark reddish brown.

(Adult from Floris.) Total length 14 inches, wing 8·8, tail 3·6, tarsus 2·55.

(♂ adult from Kei Islands.) Total length 14 inches, wing 8·7, tail 3·5, tarsus 2·65.

(♂ adult from Aroe Islands.) Total length 15 inches, wing 9, tail 3·5, tarsus 2·65.

(♂ adult from Dorey, New Guinea.) Total length 15·5 inches, wing 9·4, tail 3·9, tarsus 2·9.

(Adult from Port Molle.) Total length 16 inches, wing 10·2, tail 4·2, tarsus 2·9.

(♂ adult from Cairncross Island.) Total length 16·8 inches, wing 10·2, tail 4·1, tarsus 3.

Immature birds are easily recognized by their sharp-pointed outer primaries, and even in specimens in which the chest appears to be uniform grey there are almost always a few pale rufous feathers of the first plumage hidden beneath the grey plumage of the adult.

In *quite young* specimens the chin and throat are buff, shading into grey on the neck, and into pale rufous-brown on the rest of the underparts.

Hab. Ranging from the Kangeang Archipelago in the west, through Lombock, Floris, Sumba, Banda, Kei, Aroe, Salawatti, Western and Southern New Guinea, and the islands of Torres Straits to North-east Australia.

a. Ad. sk.	Lombock.	A. R. Wallace, Esq. [C.]. (Type of *M. gouldii*, Gray.)
b. Ad. sk.	Floris (*Wallace*).	Gould Coll.
c. Juv. sk.	Floris.	A. R. Wallace, Esq. [C.].
d, *e*. ♂ ♀ ad. sk.	Kei Is.	A. R. Wallace, Esq. [C.].
f. ♀ imm. sk.	Aroe Is., July (*H. O. Forbes*).	Tweeddale Coll.
g–*m*. ♂ ad., imm., et juv. sk. & st.	Aroe Is.	A. R. Wallace, Esq. [C.].
n. ♀ ad. sk.	Wokam, Aroe Is.	'Challenger' Exp.
o. ♂ vix ad. sk.	New Guinea (*A. R. Wallace*).	Gould Coll.
p, *q*. ♂ ad. sk. et st.	Dorey, New Guinea.	A. R. Wallace, Esq. [C.].
r, *s*. Imm. et juv. sk.	Astrolabe Mts.	A. Goldie, Esq. [C.].
t. ♀ ad. sk.	Prince of Wales Is., Torres Straits, Aug.	Voy. of H.M.S. 'Alert.'

u. ♂ ad. sk.	Booby Is., Torres Straits, Aug.	Voy. of H.M.S. 'Alert.'
v. Juv. st.	Australia.	Purchased.
w–y. Ad. et imm. st.	Port Essington, Australia.	Capt. W. Chambers, R.N. [P.].
z. ♂ ad. sk.	Port Essington.	J. B. Jukes, Esq. [P.].
a', *b'*. Ad. sk.	Cape York.	Gould Coll.
c'. Ad. sk.	Cape York.	'Challenger' Exped.
d'. Ad. sk.	Port Albany (*C. Coren*).	Tweeddale Coll.
e'–g'. Ad. et imm. sk.	Queensland (*Cockerell & Thorpe*).	Salvin-Godman Coll.
h'. Ad. sk.	Queensland.	Hume Coll.
i'. Ad. sk.	Port Molle, Queensland, Dec. (*J. Macgillivray*).	Voy. of H.M.S. 'Rattlesnake.'
k'–m'. ♂ ad. et imm. sk.	Cairncross I., Oct. (*J. M.*).	Voy. of H.M.S. 'Rattlesnake.'
n'. ♂ ad. sk.	Barnard Isles, June (*J. M.*).	Voy. of H.M.S. 'Rattlesnake.'
o'. Ad. sk.	No locality.	Tweeddale Coll.
p'. Ad. sk.	* [Amboina].	Lidth de Jeude Coll.
q'. Ad. sk.	* No locality.	Lidth de Jeude Coll.
r'. Juv. skel.	Cape York.	Purchased.

11. Megapodius freycineti.

? La Caille de la Nouvelle Guinée, *Sonn. Voy. Nouv. Guin.* p. 170, pl. 105 (Juv.) (1776).

? New Guinea Quail, *Lath. Gen. Syn.* ii. pt. ii. p. 789 (1783) (*ex Sonnerat*).

? Oriolus cothurnix, *Scop. Del. Flor. et Faun. Insubr.* ii. p. 87 (1786) (*ex Sonnerat*).

? Tetrao novæ-guineæ, *Gmel. S. N.* i. pt. ii. p. 764 (1788) (*ex Sonnerat*).

? Perdix novæ-guineæ, *Lath. Ind. Orn.* ii. p. 655 (1790) (*ex Sonnerat*).

Megapodius freycinet, *Quoy & Gaim. Voy. Uranie*, p. 125, pl. 32 (1824) [Waigiou & Guebè]; *Less. Man. d'Orn.* ii. p. 222 (1828).

Megapodius freycineti, *Temm. Pl. Col.* v. pl. 45 [no. 220] (1823 †) [*nec* Banda, Amboina!]; *Wagl. Syst. Av.* Megapodius, sp. 2, p. 207 (1827); *Less. Voy. Coquille, Zool.* i. pt. ii. p. 702 (1828); *id. Man. d'Orn.* ii. p. 224 (1828); *Wagl. Isis*, 1829, p. 736; *Less. Traité d'Orn.* p. 478 (1831); *Swains. Class. B.* ii. p. 351 (1837); *Müll. Verh. Land- en Volkenk.* p. 109 (1839–44); *Gray, Gen. B.* iii. p. 491 (1847); *Sclat. J. Linn. Soc.* ii. p. 169 (1858); *Gray, P. Z. S.* 1858, p. 196 [New Guinea]; *id. Cat. B. New Guin.* pp. 50, 61 (1859); *id. P. Z. S.* 1860, p. 362 [Kaioa, Batjan, Gilolo], 1861, pp. 288, 432, 438 [Boni]; *Rosenb. Nat. Tijdschr. Ned. Ind.* xxv. p. 252 (1863); *id. J. f. O.* 1864, p. 135; *Gray, P. Z. S.* 1864, p. 42 [Mysol, Morty Is.]; *Finsch, Neu-Guinea*, p. 180 (1865) [Salawatti, Ternate]; *Schl. Ned. Tijdschr. Dierk.* iii. p. 261 (1866) [Raou, Marèh, Obi, Gagie, & Sorong]; *Gray,*

* Both these specimens are exactly similar to birds from the Aroe Islands, and probably came from that locality.

† This date is undoubtedly erroneous.

List Gallinæ Brit. Mus. p. 19 (1867); *id. Hand-l. B.* ii. p. 255 (1870); *Schl. Dierent.* p. 213 (1872) [Gilolo]; *Meyer, SB. Ak. Wien*, lxix. pp. 88, 215 (1874); *Rosenb. Reist. naar Geelvinkb.* p. 8 (1875) [Ternate]; *Salvad. Ann. Mus. Civ. Genov.* vii. p. 793 (1875); *Cab. & Reichenow, J. f. O.* 1876, p. 326 [Pulo-Penang]; *Salvad. Ann. Mus. Civ. Genov.* ix. p. 65 (1876) [Batang Ketcil], x. p. 162 (1877) [Sorong]; *Rosenb. Malay. Archip.* pp. 407, 562 (1878–9); *D'Alb. Nuova Guin.* p. 582 (1880); *Schl. Mus. Pays-Bas*, viii. p. 66 (1880); *Oustal. Ann. Sci. Nat.* xi. p. 64 (1881); *Salvad. Ann. Mus. Civ. Genov.* xviii. p. 6 (1882); *id. Orn. Pap.* iii. p. 230 (1882); *Pleske, Bull. Ac. St. Pétersb.* xxix. pp. 536, 540 (1884) [Ternate]; *Guillem. P. Z. S.* 1885, p. 576 [Batjan], p. 663 [Waigiou]; *Nehrk. J. f. O.* 1885, p. 34 [Waigiou]; *Salvad. Aggiunte Orn. Pap.* pt. iii. p. 194 (1891).

Alecthelia urvilii, *Less. & Garn. Bull. Sci. Nat.* viii. p. 115 (1826); *Less. Voy. Coquille, Zool.* i. pt. ii. p. 703, pl. 37 (1828) [Guebè, Molucca Is.].

Alecthelia urvillii, *Less. Man. d'Orn.* ii. p. 225 (1828); *id. Traité d'Orn.* p. 479 (1831); *id. Compl. de Buff., Ois.* p. 257, pl. 8. fig. 1 (1840).

? Coturnix novæ-guineæ, *Gray, Gen. B.* iii. p. 507 (1846); *id. P. Z. S.* 1861, p. 438; *id. Cat. B. New Guin.* pp. 50, 61 (1859); *Finsch, Neu-Guin.* p. 179 (1865); *Rosenb. Malay. Arch.* p. 562 (1879).

Megapodius quoyii, *Gray, P. Z. S.* 1861, p. 289, pl. xxxii. [S. Gilolo], 1864, p. 43; *Finsch, Neu-Guin.* p. 180 (1865); *Gray, List Gallinæ Brit. Mus.* p. 19 (1867); *id. Hand-l. B.* ii. p. 255 (1870).

Megapodius alecthelia, *Quoy & Gaim., Reichenb. Tauben*, p. 6, pl. 275. fig. 1529 (1862); *Rosenb. Nat. Tijdschr. Ned. Ind.* xxv. p. 253 (1863); *id. J. f. O.* 1864, p. 135.

? Excalfactoria novæ-guineæ, *Jerd. B. Ind.* iii. p. 592 (1863).

Adult male and female. General colour black; feathers of forehead extend to the base of the culmen, those on the occiput rather elongate and forming a short full crest; top of the head, mantle, and upper back washed with grey; wings, lower back, rump, and upper tail-coverts with a brownish and sometimes an olive-brown tinge; feathers on the chin, throat, and rest of the underparts black, washed with grey like the mantle, shading into brownish black on the belly and thighs. Naked skin on the sides of the head and neck dull red; bill dusky horn-colour, paler towards the extremity; iris chestnut; legs and feet black. Total length 15 inches, wing 8·7–9, tail 3–3·3, tarsus 2·7–3.

Immature birds resemble the adult, but may be easily recognized by their smaller size, pointed outer primaries, and by the brownish-buff feathers still remaining among the dark greyish-black plumage of the underparts, also by having some of the secondaries edged with rufous on the outer web.

Hab. Molucca Islands and Western New Guinea.

a. Ad. st.	Morty Island.	A. R. Wallace, Esq. [C.].
b. ♂ ad. sk.	Morty Island (*Wallace*).	Tweeddale Coll.

c. Juv. sk.	Gilolo.	A. R. Wallace, Esq. [C.]. (Type of *M. quoyii*, Gray).
d, *e*. Ad. et ♂ juv. sk.	Gilolo.	A. R. Wallace, Esq. [C.].
f. ♀ ad. sk.	Kaioa I.	A. R. Wallace, Esq. [C.].
g, *h*. ♂ ad. et juv. sk.	Batjan.	A. R. Wallace, Esq. [C.].
i–*l*. ♂ ad. et ♀ imm. sk.	Mysol.	A. R. Wallace, Esq. [C.].
m. ♂ ad. sk.	Salawatti, July (*Hoedt*).	Gould Coll.
n. Ad. sk.	[Salawatti.]	Tweeddale Coll.
o. Ad. sk.	[Salawatti.]	Gould Coll.
p. Ad. sk.	Waigiou (*Wallace*).	Gould Coll.
q. Ad. sk.	New Guinea (*von Rosenberg*).	Gould Coll.
r. ♀ ad. sk.	[Nancowry Is., Nicobar]*, Jan. (*W. Davison*).	Hume Coll.

12. Megapodius geelvinkianus.

Megapodius geelvinkianus, *Meyer*, *SB. Ak. Wien*, lxix. p. 88 (1874) [Mafoor, Manem, & Misori Is.]; *Beccari*, *Ann. Mus. Civ. Genov.* vii. p. 716 (1875); *id. Ibis*, 1876, p. 254; *Schl. Mus. Pays-Bas*, vii. p. 63 (1880) [Misnomin & Sook Is., Dorey, New Guinea]; *Oustal. Ann. Sci. Nat.* xi. p. 74 (1881); *Salvad. Ann. Mus. Civ. Genov.* xviii. p. 6 (1882); *id. Orn. Pap.* iii. p. 227 (1882).

? Megapodius rubripes, *Rosenb.* (*nec Temm.*) *Reist. naar Geelvinkb.* p. 37 (1875) [Mafoor].

Megapodius duperreyi, *Salvad.* (*nec Less.*) *Ann. Mus. Civ. Genov.* vii. p. 793 (1875) [Ansus, Jobi I.].

Megapodius affinis, *Salvad. Ann. Mus. Civ. Genov.* viii. p. 406 (1876) [Ausus, Jobi I.].

Adult. Allied to *M. freycineti*, from which it is distinguished by having the naked skin on the head and neck cherry-red and the tarsi of the same colour. Total length 14 inches, wing 8·5–9·5, tail 2·7–3, tarsus 2·5–2·8.

Hab. Mafoor, Misori, and Jobi Is., Geelvink Bay, and Dorey, W. New Guinea.

13. Megapodius layardi.

Megapodius brazieri †, *Selat. P. Z. S.* 1869, p. 528 [founded on an egg from Vanua Lava, Banks Is.]; *Salvin & Selat. Ibis*, 1878, p. 276, note; *Schmeltz*, *Verh. Ver. Hamb.* iv. p. 79 (1879); *Brazier*, *P. Linn. Soc. N. S. W.* vi. p. 150 (1881); *Oustal. Ann. Sci. Nat.* xi. p. 153 (1881); *Wiglesw. Abh. Mus. Dresd.* 1890–91, no. 6, p. 58 (1892).

Megapodius sp., *Gray in Brenchley's Cruise of the 'Curaçoa,'* App.

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* Died in confinement; said to have come originally from Nancowry Is.

† This name is inadmissible since it is only founded on an egg.

p. 392 (1873) [Tanna & Vate Is., New Hebrides]; *E. L. & E. L. C. Layard, Ibis*, 1878, pp. 276, 280 [Vate I.].

Megapodius brenchleyi, *Salvin* (*nec Gray*), *Ibis*, 1874, p. 457.

Megapodius layardi, *Tristram, Ibis*, 1879, p. 194 [Vate I., New Hebrides]; *Layard, Ibis*, 1879, p. 485; *Schmeltz, Verh. Ver. Hamb.* iv. p. 79 (1879); *Schl. Mus. Pays-Bas*, viii. p. 65 (1880); *Oustal. Ann. Sci. Nat.* xi. p. 150 (1881); *Tristr. Cat. Coll. B.* p. 30 (1889); *Wiglesw. Abh. Mus. Dresd.* 1890–91, no. 6, p. 58 (1892).

Adult male and female. The whole of the plumage is black; top of the head, mantle, and back suffused with grey, changing to dull olive on the wings and rump; the upper tail-coverts washed with olive-brown; underparts like the mantle; belly rather paler than the breast; the head and neck, with the exception of the occiput and nape, are almost naked; and the colour of the bare skin appears to be orange-yellow. Beak pale yellow; iris dark brown; legs bright yellow. Total length 17 inches, wing 9·5, tail 3·5, tarsus 2·9.

Hab. New Hebrides.

a, b. ♂ ♀ ad. sk.	Vate I., New Hebrides, July, Sept.	C. L. Layard, Esq. [C.]. (Co-types of the species.)

14. Megapodius laperousii.

Megapodius la Pérouse, *Quoy & Gaim. Voy. Uranie*, p. 127, pl. 33 (1824) [Guam, Botta, Tinian, Marianne Is.]

Megapodius laperousii, *Temm. Pl. Col.* v. livr. 69, p. 3 (1826); *Wagler, Isis*, 1829, p. 736; *Less. Traité d'Orn.* p. 478 (1831); *id. Compl. de Buff., Ois.* p. 255, pl. 9. fig. 2 (1840); *Gray, Cat. B. Trop. Is.* p. 46 (1859); *id. P. Z. S.* 1861, p. 289, 1864, p. 43; *Reichenb. Tauben*, pp. 5, 190, pl. 276. fig. 1532 (1862); *Schl. Mus. Pays-Bas*, viii. p. 65 (1880); *Oustal. Ann. Sci. Nat.* xi. p. 138 (1881); *id. Le Nat.* 1889, p. 261; *id. Ann. Sci. Nat.* (7) xi. p. 196 (1891) [Seypan and Pagon Is., Marianne Group].

Megapodius la Peyrouse, *Less. Man. d'Orn.* ii. p. 221 (1828).

Megapodius senex, *Hartl. P. Z. S.* 1867, p. 830 [Pelew Is.]; *Hartl. & Finsch, P. Z. S.* 1868, pp. 7, 118, 1872, pp. 89, 103; *id. Cat. Mus. Godeff.* v. p. 11 (1874); *Finsch, J. Mus. Godeff.* iv. pt. viii. p. 29, pl. v. figs. 2 & 3 (1875); *Schl. Mus. Pays-Bas*, viii. p. 65 (1880); *Oustal. Ann. Sci. Nat.* xi. p. 140 (1881); *Schmeltz, Ethn. Abth. M. G.* p. 407 (1881); *Oustal. Le Nat.* 1889, p. 261; *Wiglesw. Abh. Mus. Dresd.* 1890–91, no. 6, p. 58 (1892).

Megapodius perousii, *Wiglesw. Abh. Mus. Dresd.* 1890–91, no. 6, p. 58 (1892).

Adult. Top of the head French grey; forehead, sides of the head, and throat very thinly covered with feathers of the same colour; mantle, back, and underparts greyish black, shading into very dark olive-brown on the wings; rump and upper tail-coverts dark brownish chestnut; tail brownish black; middle of the belly paler than the rest of the underparts; naked skin on the face red: bill and legs

yellow; feet and claws black. Total length 9·5 inches, wing 7, tail 2·3, tarsus 2.

An *immature bird* (type of the species) differs from the adult in having the general colour brown, shading into rufous-brown on the underparts, and the coverts and secondaries margined with rufous.

Hab. Marianne and Pelew Islands.

a. Ad. sk.	Pelew Is.	J. Cohen, [C.].
b. Vix ad. sk.	Pelew Is. (*J. Cohen*).	Tweeddale Coll.

15. Megapodius pritchardi.

Megapodius sp., *Gray, Cat. B. Trop. Isl.* p. 46 (1859) [Samoa].
Megapodius — ?, *Gray, Cat. B. Trop. Is.* p. 46 (1859) [Hapai I.].
Megapodius stairi*, *Gray, P. Z. S.* 1861, p. 290; *Reichenb. Tauben*, p. 190 (1862); *Gray, P. Z. S.* 1864, p. 44; *Finsch & Hartl. Orn. Centralpol.* p. 155 (1867); *Finsch, J. f. O.* 1872, p. 52; *Whitmee, Ibis*, 1875, p. 447 [real locality of type (egg) Niuafou not Samoa]; *Layard, P. Z. S.* 1876, p. 496; *Finsch, P. Z. S.* 1877, pp. 782, 783; *Oustal. Ann. Sci. Nat.* xi. p. 144 (1881); *Wiglesw. Abh. Mus. Dresd.* 1890-91, no. 6, p. 58 (1892).
Megapodius burnabyi*, *Gray, P. Z. S.* 1861, p. 290 [Hapai I.]; *Reichenb. Tauben*, p. 190 (1862); *Gray, P. Z. S.* 1864, pp. 42, 44; *Finsch & Hartl. Orn. Centralpol.* p. 155 (1867); *id. P. Z. S.* 1869, p. 545 [Tonga Is.]; *Gräffe, J. f. O.* 1870, p. 420; *Layard, P. Z. S.* 1876, p. 503 [not found in Friendly Is.].
Megapodius sp., *Bennett, P. Z. S.* 1862, p. 247 [Niuafou].
Megapodius pritchardii, *Gray, Ann. Mag. N. H.* (3) xiv. p. 378 (1864); *id. P. Z. S.* 1864, p. 41, pl. vi. [Niuafou]; *Finsch & Hartl. Orn. Centralpol.* p. 153, pl. ii. fig. 5 [egg] (1867); *Gray, Hand-l. B.* ii. p. 255 (1870); *Hutton, Trans. N. Zeal. Inst.* iv. p. 165 (1872); *Schl. Mus. Pays-Bas*, viii. p. 64 (1880); *Schmeltz, Ethn. Abth. M. G.* 1881, p. 205; *Baker, N. Zeal. Journ. Sci.* ii. p. 174 (1884) [Niuafou].
Megapodius sp., *Hutton, Ibis*, 1869, p. 353 [Niuafou].
Megapodius huttoni, *Bull. Trans. N. Zeal. Inst.* iii. p. 14 (1870).

Adult †. Wings and back rufous brown; head, neck, interscapular region, breast, and upper part of the belly dirty lead-grey; middle of the belly, vent, and under tail-coverts dirty yellowish grey; throat and neck thinly feathered. In the type-specimen the tail is rufous brown, mixed with white; some of the longer upper tail-coverts are also white, and the basal portions of the primaries, with the exception of the first, are mostly white, while some of the outer secondaries also show traces of white towards the base. Naked skin on the cheeks and upper part of the neck red; bill

* Neither of these names, even if really founded on eggs of this species (which is somewhat doubtful, as the localities of the types are uncertain), should be used, such names being quite inadmissible.

† The amount of white on the basal part of the primaries and outer secondaries, upper tail-coverts, and tail-feathers appears to vary in each individual specimen.

yellow, dusky towards the base; feet pale red. Total length 10·5 inches, wing 7·4, tail 2·15, tarsus 2·1.

Hab. Ninafou or Hope Island.

a. Ad. sk. (in spirit).	Ninafou.	W. T. Pritchard, Esq. [C.]. (Type of the species.)
b. Ad. sk. (bad state).	[Ninafou.]	Gould Coll.

2. EULIPOA.

Head and neck feathered with the exception of a small space surrounding the eye which is mostly naked.

Nostrils oval.

Tail composed of 12 sharp-pointed feathers, the middle pair being the longest.

Upper tail-coverts much shorter than the tail-feathers.

1st primary intermediate in length between the 7th and 8th, and much longer than the 10th; 4th slightly the longest. Secondaries *much shorter* than the primaries.

Tarsi and feet large; fore part of tarsus covered with a single row of scutes.

Range. Islands of Gilolo, Batjan, Ternate, Boeroe, Ceram, and Amboina.

1. Eulipoa wallacei.

Megapodius sp. nov., *Wallace, Ibis*, 1860, p. 197.

Megapodius wallacei, *Gray, P. Z. S.* 1860, p. 362, pl. clxxi. [E. Gilolo], 1861, p. 290, 1864, p. 43; *Reichenb. Tauben*, p. 162, *Novit.* pl. vii. fig. 81 (1862); *Wallace, P. Z. S.* 1863, p. 34 [Boeroe, Ternate]; *Finsch, Neu-Guin.* p. 180 (1865) [Batjan]; *Schl. Ned. Tijdschr. Dierk.* iii. p. 264 (1866) [Amboina, Ceram]; *Gray, List Gallinæ Brit. Mus.* p. 21 (1867); *Wallace, Malay Arch.* ii. p. 148 (1869); *Gray, Hand-l. B.* ii. p. 255 (1870); *Schl. Dierent.* p. 213 (1872); *Rosenb. Reist. naar Geelvinkb.* p. 8 (1875); *Salvad. Ann. Mus. Civ. Genov.* vii. p. 793 (1875); *Rosenb. Malay. Archip.* p. 407 (1879); *Schl. Mus. Pays-Bas*, viii. p. 75 (1880); *Oustal. Ann. Sci. Nat.* xi. p. 154 (1881); *Salvad. Ann. Mus. Civ. Genov.* xviii. p. 7 (1882); *id. Orn. Pap.* iii. p. 241 (1882); *Blas. & Nehrk. Verh. Ges. Wien*, xxxii. p. 430 (1882) [Amboina]; *Pleske, Bull. Ac. St. Pétersb.* xxix. p. 540 (1884) [Ternate]; *Salvad. Aggiunte Orn. Pap.* pt. iii. p. 195 (1891).

Adult. Forehead olive, shading into rufescent olive-brown on the short occipital crest; mantle, lesser and shorter median wing-coverts olive; scapulars and feathers of the middle of the back slate-grey, more or less tinged with olive, and each with a wide bright chestnut subterminal band; the inner feathers of the inner median wing-coverts similar to the scapulars, butt ipped with pale whitish grey; secondary-coverts olive, each with a very wide subterminal band of bright chestnut; primaries brownish black, the terminal part of the outer web of the outer quills pale rufous buff, and the second to the fifth quills with a buff spot on basal part of the outer web; the secondaries pale ochraceous brown, the innermost ones with a

chestnut patch on the middle of the outer web; lower back, rump, tail-coverts, and underparts dark grey; chin dirty white; middle of belly and vent white. Bill dark olive, becoming yellowish towards the extremity; legs dark olive, feet blackish. Total length 14 inches, wing 7·6–8, tail 1 2·6–3·2, tarsus 2·2.

Hab. Same as that of the genus.

a, b. Ad. sk.	East Gilolo.	A. R. Wallace, Esq. [C.]. (Types of the species.)
c. Ad. sk.	East Gilolo (*A. R. Wallace*).	Gould Coll.
d. ♀ ad. sk.	Boeroe.	A. R. Wallace, Esq. [C.].

3. LIPOA.

	Type.
Leipoa, *Gould, P. Z. S.* 1840, p. 126	L. ocellata.
Leipoa, *Gray, List of Gen. B.* p. 76 (1841)	L. ocellata.
Lipoa, *Sundev. Tentamen*, p. 118 (1872)	L. ocellata.

Top of the head covered with feathers forming a short thick crest.

Nostrils elongate and oval.

Tail long, rounded, and composed of 16 feathers.

The longer upper tail-coverts reach to the end of the tail.

1st primary intermediate in length between the 9th and 10th; 5th slightly the longest.

Tarsi and feet rather short; a double row of large hexagonal plates down the front of the tarsus.

Range. Southern and Western Australia.

1. Lipoa ocellata.

Leipoa ocellata, *Gould, P. Z. S.* 1840, p. 126 [W. Australia]; *id. B. Austr.* v. pt. i. pl. 78 (1840); *Gray, List of B.* pt. iii. *Gall.* p. 21 (1844); *id. Gen. B.* iii. p. 491 (1847); *id. P. Z. S.* 1861, p. 288, 1864, p. 42 [S. & W. Australia]; *Gould, Hand-l. B. Austr.* ii. p. 155 (1865); *Gray, List Gallinæ Brit. Mus.* p. 18 (1867); *Schl. Mus. Pays-Bas*, viii. p. 83 (1880); *Oustal. Ann. Sci. Nat.* xi. p. 11 (1881); *Bennett, Proc. Linn. Soc. N.S.W.* viii. p. 193 (1883) [W. New South Wales]; *Ramsay, Tabl. List Austr. B.* p. 18 (1888) [N. S. Wales, Interior; South and West Australia]; *North, Nests & Eggs Austr. B.* p. 281 (1889).

Adult male and female. Top of head dark brown, feathers elongate, pointed, and forming a short thick crest; mantle grey, the lower feathers tipped with rufous-brown; feathers of the middle of the back, scapulars, and wing-coverts grey, with a wide subterminal blackish-brown band, edged internally with white and tipped with rufous buff; the longer scapulars and inner secondaries are very similarly marked, but the basal part is brownish grey irregularly barred with black, and the band at the extremity is mostly rufescent olive-brown, irregularly marked and edged with black; lower back, rump, and upper tail-coverts grey washed with brown, the latter barred with black and tipped with whitish grey; the longest upper tail-coverts are as long as the middle tail-feathers; primaries and

primary-coverts pale brown, darkest towards the extremity and tipped with white, most of the former being mottled with black on the terminal half of the outer web; rest of secondaries very similar, but much more coarsely mottled with black, white, and brown on the terminal half of the outer web; forehead and superciliary stripes washed with grey: cheeks, chin, and throat pale rust-colour, the median feathers with wide white centres; chest and upper part of breast grey, with a band of black and white feathers down the middle; rest of underparts whitish, shading into buff on the vent and under tail-coverts; feathers of the sides barred with black; under wing-coverts and axillaries washed with chestnut; median tail-feathers brownish, with irregular mottled bars of black; outer feathers black, somewhat widely tipped with creamy white. Naked skin on the sides of the head pale blue; bill, legs, and feet dark brown; iris light hazel. Total length 24 inches, wing 12·5, tail 9, tarsus 3·1.

Hab. Same as that of the genus.

a, b. ♂ ♀ ad. st.	S. Australia.	Sir George Grey [P.].
c. Ad. sk.	S. Australia (*J. Cockerell & J. Thorpe*).	Salvin-Godman Coll.
d. Skeleton.		Zool. Soc. Coll.

4. TALEGALLUS.

	Type.
Talegallus, *Less. Voy. Coquille*, i. pt. ii. p. 715 (1828)	T. cuvieri.
Talegalla, *Less. Man. d'Orn.* ii. p. 185 (1828)	T. cuvieri.
Tallegallus, *Schl. Mus. Pays-Bas*, viii. p. 78 (1880).....	T. cuvieri.

Top of the head covered with narrow feathers; sides of the head, chin, throat, and fore part of the neck mostly naked; no wattle.

Nostrils oval.

Tail rather longer than in *Æpypodius*, rounded, composed of 16 feathers, the middle pair being the longest.

Upper tail-coverts black, not extending nearly to the end of the tail-feathers.

1st primary much shorter than the 10th; 5th and 6th slightly the longest.

Tarsi and feet large; fore part of tarsus covered with a single row of scutes.

Range. New Guinea and some of the islands off the coast.

Key to the Species.

A. Top of the head covered with thin recumbent hair-like feathers.
  a. Bill yellow ..... *cuvieri*, p. 465.
  b. Bill sooty-brown ..... *fuscirostris*, p. 466.
B. Top of the head covered with semi-erect and much wider feathers with well-developed webs.
  c. Tail shorter, 6·4–6·8 inches..... *jobiensis*, p. 467.
  d. Tail longer, 8 inches ..... *longicaudus*, p. 467

1. Talegallus cuvieri.

Talegallus cuvieri, *Less. Voy. Coquille, Zool. Atl.* pl. 38 (1826); *id. Voy. Coquille, Zool.* i. pt. ii. p. 716 (1828) [Dorey, New Guinea]; *Quoy & Gaim. Voy. Astrolabe, Atl. Zool. Oiseaux*, pl. 25. figs. 5, 6 [sternum] (1833); *Less. Compl. de Buff., Ois.* p. 254, pl. 8. fig. 2 (1840); *Gray, Gen. B.* iii. p. 489 (1846); *id. Cat. B. New Guin.* pp. 49 [part., New Guinea], 61 (1859); *id. P. Z. S.* 1859, p. 159 [Dorey, New Guinea], 1861. pp. 288, 438 [part.]; *Reichenb. Tauben*, p. 9, pl. 277. fig. 1538 (1862); *Gray, P. Z. S.* 1864, p. 42 [part.]; *Finsch, Neu-Guin.* p. 179 (1865) [part.]; *Schl. Ned. Tijdschr. Dierk.* iii. p. 259 (1866) [part.]; *Gray, List Gallinæ Brit. Mus.* p. 18 (1867) [part.]; *id. Hand-l. B.* ii. p. 254 (1870) [part.]; *Meyer, SB. Ak. Wien*, lxix. pp. 74, 85 (1874) [part., Andai, Passim, Nappan, Geelvink Bay]; *Rosenb. Reist. naar Geelvinkb.* p. 84 (1875) [Andai, New Guinea]; *Salvad. Ann. Mus. Civ. Genov.* vii. p. 792 (1875), ix. pp. 327, 334 (1877) [Salawatti, Warbusi, Amberbaki, Dorei-Hum, and Ramoi], x. p. 162 (1877); *Schl. Notes Leyd. Mus.* i. p. 159 (1879) [part.]; *Rosenb. Malay. Archip.* p. 562 (1878–9); *D'Alb. Nuova Guin.* p. 582 (1880); *Oustal. Ann. Sci. Nat.* xi. p. 43 (1881); *Salvad. Ann. Mus. Civ. Genov.* xviii. p. 8 (1882) [Has, Sorong]; *id. Orn. Pap.* iii. p. 245 (1882); *Guillem. P. Z. S.* 1885, p. 664 [Salawatti and Dorey Bay].

Talegalla cuvieri, *Less. Man. d'Orn.* ii. p. 186 (1828); *id. Traité d'Orn.* p. 526 (1831); *Sclat. Journ. P. Linn. Soc.* ii. p. 168 (1858); *Wallace, P. Z. S.* 1862, p. 165; *Rosenb. J. f. O.* 1864, p. 135 [part].

Tallegalla cuvieri, *Rosenb. Nat. Tijdschr. Ned. Ind.* xxv. p. 252 (1863) [part.].

Tallegallus cuvieri, *Schl. Mus. Pays-Bas*, viii. p. 80 (1880) [part.].

Adult male and female. General colour of the plumage black; head and back of the neck thinly covered with narrow (almost hair-like) feathers, which are recumbent on the crown; chin and throat thinly covered with brownish-white or dirty-white feathers: iris yellow or yellowish red; bill orange-red (yellow in dried specimens); naked skin on the sides of the head and throat reddish brown; legs and feet orange or yellow. Total length 20–21 inches, wing 10·8, tail 6·3, tarsus 3·3–3·5.

In a *younger example* the back and sides of the neck are mostly dark chestnut; the outer primaries extremely pointed; some of the secondaries marked with rufous buff along the margin of the outer web; and most of the wing-coverts and the feathers of the mantle indistinctly edged with dull rufous; the upper mandible is dusky, especially towards the base, and the top of the head, chin, and throat more thickly covered with feathers than in the adult.

In a *still younger example* the top of the head is mostly covered with brownish-coloured downy feathers; while on the shoulders and the middle of the neck and chest patches of the reddish-brown feathers of the first plumage are still intermixed with the dark plumage of the adult.

Hab. Western New Guinea, Salawatti, Mysol, Gilolo.

a. Juv. sk.	Gilolo.	Purchased.
b, *c*. ♀ ad. sk.	Kasim, Mysol Island, July, Sept. (*A. R. Wallace*).	Gould Coll.
d, *e*. Ad. st. et sk.	New Guinea.	A. R. Wallace, Esq. [C.].
f. Imm. sk.	Dorey.	A. R. Wallace, Esq. [C.].

2. Talegallus fuscirostris.

Talegallus cuvieri, *Gray* (*nec Less.*), *P. Z. S.* 1858, p. 187 [Aroe Is.]; *id. Cat. B. New Guin.* p. 49 [part.]; *id. P. Z. S.* 1861, pp. 288, 438 [part.]; *Reichenb. Tauben*, p. 162 (1862); *Gray, P. Z. S.* 1864, p. 42 [part.]; *Finsch, Neu-Guin.* p. 179 (1865) [part.]; *Schl. Ned. Tijdschr. Dierk.* iii. p. 259 (1866) [part.]; *Rosenb. Reis. naar de Zuidoostereil*, pp. 50, 51 (1867); *Gray, List Gallinæ Brit. Mus.* p. 18 (1867) [part.]; *id. Hand-l. B.* ii. p. 254 (1870) [part.]; *Meyer, SB. Ak. Wien*, lxix. p. 85 (1874) [part., Rubi, S. coast of Geelvink Bay]; *Salvad. & D'Alb. Ann. Mus. Civ. Genov.* vii. p. 839 (1875) [Mount Epa]; *D'Alb. Ann. Mus. Civ. Genov.* x. p. 20 (1877) [Fly River]; *Rosenb. Malay. Archip.* p. 372 (1878–9).

Tallogalla cuvieri, *Rosenb. Nat. Tijdschr. Ned. Ind.* xxv. p. 252 (1863) [part.].

Talegalla cuvieri, *Rosenb. J. f. O.* 1864, p. 135 [part.].

Talegallus sp., *Sharpe, P. Z. S.* 1874, p. 607 [egg from S.E. New Guinea].

Megapodius cuvieri, *Ramsay, P. Linn. Soc. N. S. W.* i. p. 394 (1877) [Laloki R., S.E. New Guinea], ii. p. 122 (1877) [Port Moresby].

Talegallus fuscirostris, *Salvad. Ann. Mus. Civ. Genov.* ix. pp. 332, 334 (1877) [S. New Guinea and Aroe Is.], x. pp. 20 [note] 162 (1877) [Kulukadi]; *Sharpe, J. Linn. Soc.* xiii. p. 504 (1877), xiv. p. 634 (1879) [Port Moresby]; *Ramsay, P. Linn. Soc. N. S. W.* iii. p. 296 (1878); *D'Alb. & Salvad. Ann. Mus. Civ. Genov.* xiv. p. 127 (1879); *Schl. Notes Leyd. Mus.* i. p. 160 (1879); *D'Alb. Nuova Guin.* pp. 310, 582, 585, 588 (1880) [near Hall Sound]; *Oustal. Ann. Sci. Nat.* xi. p. 49 (1881); *Salvad. Ann. Mus. Civ. Genov.* xviii. p. 8 (1882); *id. Orn. Pap.* iii. p. 248 (1882); *Meyer, SB. Abh. Ges. Isis*, 1884, Abh. i. p. 52; *Salvad. Ann. Mus. Civ. Genov.* (2) ix. p. 590 (1890) [Rigo]; *Meyer, Ibis*, 1890, p. 424; *Salvad. Aggiunte Orn. Pap.* pt. iii. p. 195 (1891).

Megapodius (Talegallus) fuscirostris, *Ramsay, P. Linn. Soc. N. S. W.* iv. p. 101 (1879).

Tallegallus cuvieri, *Schl. Mus. Pays-Bas*, viii. p. 80 (1880) [part., Aroe Is.].

Adult male and female. Plumage similar to that of *T. cuvieri*, but the bill is sooty brown instead of orange-red. Naked skin of the head and neck blackish grey; iris yellow or brown; feet yellow. Total length 21 inches, wing 11–11·5, tail 6·8–7, tarsus 3·5–3·7.

Hab. Southern New Guinea, ranging north-eastwards to Rubi on Geelvink Bay; Aroe Is.

a. Ad. sk.	Sogeri District, S.E. New Guinea. Feb.	H. O. Forbes, Esq. [C.].
b. Ad. sk.	Port Moresby.	K. Broadbent, Esq. [C.].
c. Juv. sk.	Aroe Is.	A. R. Wallace, Esq. [C.].

3. Talegallus jobiensis.

Talegallus jobiensis, *Meyer, SB. Ak. Wien*, lxix. Abth. i. pp. 74, 87 (1874) [Jobi I.]; *Beccari, Ann. Mus. Civ. Genov.* vii. p. 716 (1875); *Salvad. Ann. Mus. Civ. Genov.* vii. p. 792 (1875) [Ansus], ix. pp. 328, 334 (1877); *Beccari, Ibis*, 1876, p. 254; *Schl. Notes Leyd. Mus.* i. p. 159 (1879); *Oustal. Ann. Sci. Nat.* xi. p. 54, fig. 36 (1881) [Eastern shore of Geelvink Bay]; *Salvad. Ann. Mus. Civ. Genov.* xviii. p. 8 (1882); *id. Orn. Pap.* iii. p. 244 (1882); *Guillem. P. Z. S.* 1885, p. 663 [Jobi]; *Meyer, Ibis*, 1890, p. 424; *Salvad. Aggiunte Orn. Pap.* pt. iii. p. 195 (1891).
Tallegallus cuvieri jobiensis, *Schl. Mus. Pays-Bas*, viii. p. 82 (1880).

Adult. Plumage black like that of the other species, from which it is easily distinguished by the much wider and thicker feathers which cover the top of the head, and which are more or less erect. The naked skin of the head and the bill dusky red; naked skin of the throat blood-red; legs, feet, and claws fiery red; iris reddish brown. "Total length 21·5 inches, wing 11·8, tail 6·6, tarsus 3·6" (*Salvadori*).

In our specimen the feathers of nape and sides of the neck are dark chestnut marked with black, but this is no doubt a sign of immaturity. Its measurements are as follows:—Total length 23 inches, wing 11·4, tail 7·3, tarsus 3·85.

Hab. Jobi I. and the eastern shore of Geelvink Bay; also S.E. New Guinea.

a. ♂	vix ad. sk.	Mainland of S.E. New Guinea, opposite China Straits.	C. Hunstein [C.].

4. Talegallus longicaudus.

? Talegallus (*sive* Aepypodius) sp. inc., *Meyer, Ibis*, 1890, p. 423 [Constantine Harbour, N.E. New Guinea].
Talegallus longicaudus, *Meyer, Abh. Mus. Dresd.* 1890–91, no. 4, p. 15 (1892) [Astrolabe Bay].

Said to be distinguished from *T. jobiensis* by its darker colour, longer tail, and shorter tarsus. Total length 23·2 inches, wing 11·2, tail 8, tarsus 3.

I have little doubt that this "species" is really identical with *T. jobiensis*.

Hab. Astrolabe Bay, N.E. New Guinea.

5. CATHETURUS.

	Type.
Alectura, *Lath.* (*nec* Alectrurus, *Vieill.* 1816; *nec Swains.* 1837) *Gen. Hist. B.* x. p. 455 (1824)	C. lathami.
Catheturus, *Swains. Class. B.* ii. p. 206 (1837)	C. lathami.

Head and neck almost naked, thinly covered with hair-like feathers; a large vascular wattle at the base of the neck.

Nostrils round.

Tail composed of 18 feathers, the 5th pair being considerably

longer than the central pair and much longer than the outer pair, producing a ᗣ-shaped appearance when the feathers are expanded.

Upper tail-coverts short, blackish brown.

1st primary much shorter than the 2nd, which is about equal to the 10th; 5th and 6th the longest.

Tarsi and feet rather large; fore part of tarsus covered with a double row of hexagonal plates.

Range. North-east and East Australia.

1. Catheturus lathami.

New Holland Vulture, *Lath. Gen. Hist. B.* i. p. 32, pl. vi. (1821).

Alectura lathami, *Lath. Gen. Hist. B.* x. p. 455 (1824); *J. E. Gray, Zool. Misc.* p. 3 (1831); *Jard. & Selb. Ill. Orn.* iii. pl. 140.

Meleagris lindesayii, *Jameson, Mem. Wernerian Nat. Hist. Soc.* vii. p. 473 (1835).

Catheturus australis, *Swains. Class. B.* i. p. 284, fig. 92 (1836), ii. p. 206 (1837).

Brush Turkey, *Gould, B. Austr.* v. pl. 77 (1840).

Talegalla lathami, *Gould, P. Z. S.* 1840, p. 111; *id. B. Austr.* v. pl. 77 (1840) [N.S. Wales and Queensland]; *Bartlett, P. Z. S.* 1860, p. 426; *Sclat. & Wolf, Zool. Sket.* ii. pl. xl. (1861); *Leycester, Ibis,* 1861, p. 159 [Leycester's Creek, Richmond R.]; *Sclat. P. Z. S.* 1869, p. 628; *Garrod, P. Z. S.* 1873, pp. 469, 640; *Forbes, P. Z. S.* 1878, p. 127 [Cape York]; *Huet, Bull. Soc. Acclim.* (3) x. p. 611 (1883).

Talegallus lathami, *Gray, Gen. B.* iii. p. 489, pl. 123, fig. 2 (1846); *id. P. Z. S.* 1861, p. 288, 1864, p. 42; *Gould, Hand-b. B. Austr.* ii. p. 150 (1865) [Cape Howe to Port Molle]; *Ramsay, Ibis,* 1866, p. 334 [Port Denison]; *Gray, List Gallinæ Brit. Mus.* p. 18 (1867); *id. Hand-l. B.* ii. p. 254 (1870); *Hutton, Ibis,* 1870, p. 379 [Auckland, introduced]; *Ramsay, P. Z. S.* 1876, p. 116 [N.E. Queensland]; *Schl. Notes Leyd. Mus.* i. p. 159 (1879); *Ramsay, Tabl. List Austr. B.* p. 18 (1888) [Cape York, Rockingham Bay, Port Denison, Wide Bay district, Dawson R., Richmond and Clarence Rs., and N. S. Wales]; *North, Nests & Eggs Austr. B.* p. 279 (1889).

Catheturus novæ hollandiæ, *Bonap. C. R.* xlii. p. 876 (1856).

Catheturus lathami, *Reichenb. Tauben,* p. 10, pl. 277. fig. 1540 (1862).

Tallegalla (Catheturus) lathami, *Cornély, Bull. Soc. Acclim.* (2) viii. p. 528 (1871), (3) i. p. 171 (1874), (3) ii. p. 54 (1875); *St. Denys, Bull. Soc. Acclim.* (3) ii. p. 51 (1875), (3) iv. p. 569 (1877), (3) v. p. 113 (1878); *Mairet, Bull. Soc. Acclim.* (3) v. p. 176 (1878).

Tallegallus lathamii, *Schl. Mus. Pays-Bas,* viii. p. 79 (1880).

Talegallus (Catheturus) lathami, *Oustal. Ann. Sci. Nat.* xi. p. 27 (1881).

Adult male and female. General colour of the upper parts dark brownish black, lighter on the lower back, rump, and upper tail-coverts; feathers of the underparts dark brownish grey, rather widely edged with white, though in some specimens the pale edgings are much less conspicuous; belly and thighs nearly white in some examples, while in others these parts are greyish

brown; tail almost black. Skin of head and neck pink-red, thinly sprinkled with short hair-like blackish-brown feathers; wattle bright yellow, tinged with red where it unites with the red of the neck*; bill black; iris and feet brown. Total length 25·5 inches, wing 12, tail 9·8–10·2, tarsus 4–4·2.

In this species the middle pair of tail-feathers are not very much longer than the outer pair, while the fifth pair are the longest.

Hab. Same as that of the genus.

a, b. ♂ ad. et imm. st.	Australia.	Earl of Derby [P.].
c. Ad. sk.	Australia.	A. Cunningham, Esq. [P.]. (Type of the species.)
d. ♂ ad. sk.	Cape York.	'Challenger' Exped.
e, f. Ad. sk.	Cape York (*Cockerell & Thorpe*).	Salvin-Godman Coll.
g, h. Ad. sk.	Port Molle, Queensland, Dec. (*J. Macgillivray*).	Voyage of H.M.S. 'Rattlesnake.'
i. Pull. st.	Bred in the Zoological Gardens.	Zool. Soc. Coll.
k, l. Juv. skeletons.		Zool. Soc. Coll.

6. AEPYPODIUS.

	Type.
Aepypodius, *Oustal. Le Nat.* no. 41, p. 323 (1880)	A. bruijni.
Aepipodius, *Salvad. Aggiunte Orn. Pap.* pt. iii. p. 195 (1891)	A. arfakianus.

Head and neck mostly naked; a pendulous wattle at the base of the fore neck; and a fleshy crest extending from the base of the culmen to the crown.

Nostrils round.

Tail moderately long, composed of 16 feathers, the middle pair shorter than the 2nd and 3rd pairs, giving the tail when expanded a peculiar ∩-shape.

Upper tail-coverts short, and dark chestnut.

1st primary much shorter than the 2nd, which is about equal to the 10th; 7th or 8th slightly the longest.

Tarsi and feet rather large; front of the tarsus covered with a single row of wide scutes; only the last two or three being divided down the middle.

Range. New Guinea and Waigiou.

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* The wattle at the base of the neck which Gould tells us is present in both sexes, though smaller in the female, is not apparent in the majority of our specimens. But in an example from Cape York it is well developed, and in the dried skin takes a parachute-like form surrounding the entire neck, being if anything more largely developed towards the back of the neck, whereas in Gould's figure it is represented as a pendulous wattle on the fore part of the neck.

Key to the Species.

A. Chest mostly chestnut; a large cylindrical wattle on each side of the nape; top of the head covered with horny papilli ..... *bruijni*, p. 470.
B. Chest brownish black; no wattles on the nape; top of the head thinly covered with black hair-like feathers ..... *arfakianus*, p. 470.

1. Aepypodius bruijni.

Talegallus bruijnii, *Oustal. C. R.* xc. p. 906 (1880) [Waigiou]; *id. Guide du Naturaliste*, nos. 9 & 10, p. 192 (1880); *id. Bull. Assoc. Sci. Fr.* (2) i. p. 173 (1880); *id. Le Nat.* no. 41, p. 323 (1880); *Reichenow & Schal. J. f. O.* 1881, p. 72.
Tallegallus bruijnii, *Schl. Mus. Pays-Bas*, viii. p. 82 (1880).
Aepypodius bruijnii, *Oustal. Le Nat.* no. 41 p. 323 (1880); *Salvad. Ann. Mus. Civ. Genov.* xviii. p. 8 (1882); *id. Orn. Pap.* iii. p. 253 (1882).
Talegallus (Aepypodius) bruijnii, *Oustal. Ann. Sci. Nat.* xi. p. 38, figs. 33 [adult], 34 [juv.] (1881).

Adult. General colour above brownish black, darker on the mantle and upper back, browner on the lower back, and dark chestnut on the rump and upper tail-coverts; chest and upper breast mostly chestnut, shading into dirty grey on the rest of the underparts, some of the feathers of the lower breast and belly being also washed with chestnut. Head and neck almost entirely naked, with the exception of a few hair-like feathers, which are most numerous along the superciliary stripe and on the nape. An elongate fleshy crest commences on the forehead at the base of the culmen, elevated in front and spread out over the crown of the head to the nape, the whole being covered with close-set horny papilli; on either side of the nape there arises a large elongate wattle placed at right angles to the neck, and from the basal part of the fore neck there hangs down over the chest a single long subcylindrical wattle: the colour of these wattles as well as the naked skin on the head and neck appears to have been red or orange; bill and feet dusky; iris black. Total length 9 inches, wing 11·5, tail 5·7, tarsus 4·2. (*Brit. Mus.*)

Total length 18·8 inches, wing 12·4, tail 6·4, tarsus 3·8. (*Oustalet.*)

Hab. Island of Waigiou.

a. ♂ ad. sk. Waigiou (*A. A. Bruijn*). Purchased.

2. Aepypodius arfakianus.

Talegallus arfakianus *, *Salvad. Ann. Mus. Civ. Genov.* ix. pp. 333, 334 (1877) [chicks from Arfak Mts.]; *Oustal. Ann. Sci. Nat.* xi. p. 53 (1881).

* I have allowed this name to stand though I think the evidence that *Talegallus arfakianus*, Salvad., is the young of *Aepypodius pyrrhopygius* is by no means conclusive. No doubt the rounded nasal opening is sufficient to prove that these young birds really belong to the genus *Aepypodius*, and not to *Talegallus*; but I am not prepared to consider them identical with *A. pyrrhopygius* from the evidence before me. The system of giving names to very young birds is most objectionable, and such names really ought not to be retained, being only one degree better than names founded on eggs.

Talegallus pyrrhopygius, *Schl. Notes Leyd. Mus.* i. p. 159 (1879) [West coast of Geelvink Bay ?]; *Reichenow & Schal. J. f. O.* 1879, p. 422; *Oustal. C. R.* xc. p. 906 (1880); *id. Bull. Assoc. Sci. Fr.* (2) i. p. 173 (1880); *Ramsay, P. Linn. Soc. N.S.W.* viii. p. 26 (1883) [Egg from Astrolabe Mts.].

Talegallus arfaki, *Schl. Notes Leyd. Mus.* i. p. 160 (1879).

Tallegallus pyrrhopygius, *Schl. Mus. Pays-Bas*, viii. p. 82 (1880).

Talegallus (*Æpypodius*) pyrrhopygius, *Oustal. Ann. Sci. Nat.* xi. p. 40, fig. 35 (1881) [Ajermasi, Arfak Mts.].

Aepypodius arfakianus, *Salvad. Ann. Mus. Civ. Genov.* xviii. p. 8 (1882); *id. Orn. Pap.* iii. pp. 251, 564 [Sogeri] (1882).

Aepipodius arfakianus, *Salvad. Aggiunte Orn. Pap.* pt. iii. p. 195 (1891).

Adult. General colour of the upper parts black, tinged with brown on the wings; rump and upper tail-coverts dark chestnut, underparts browner. Head and neck almost naked with the exception of the nape and the back of the head, which are thickly covered with black feathers; top of the head sparingly covered with hair-like black feathers; a fleshy crest from the base of the culmen to the middle of the crown; an elongated wattle from the base of the fore neck (but the lateral wattles on the sides of the neck, so conspicuous in *A. bruijni*, are absent). Naked skin on the sides of the head and the wattles are apparently yellowish; feet and bill dusky. Total length 17·5 inches, wing 10·5, tail 5·5, tarsus 3·6.

In a younger specimen the chin and throat are covered with yellowish-white downy feathers.

Hab. New Guinea; West coast of Geelvink Bay, and Astrolabe Mountains.

a, b. Ad. sk.	Astrolabe Mts., S.E. New Guinea.	H. H. Romilly, Esq. [P.].
c. Imm. sk.	Astrolabe Mts.	A. Goldie, Esq. [C.].
d. ♀ imm. sk.	Sogeri, S.E. New Guinea.	H. O. Forbes, Esq. [C.].

7. MEGACEPHALON.

	Type.
Megacephalon, *Temm., Gray, Gen. B.* iii. p. 489 (1846) ..	M. maleo.
Macrocephalon, *Müll. Archiv für Naturg.* xii. pt. i. p. 116 (1846)	M. maleo.
Megacephala, *Heine, Nomencl. Mus. Hein.* p. 303 (1887) ..	M. maleo.

Head naked, covered with a large round occipital casque; a rounded tubercle behind each nostril; neck, chin, and throat thinly covered with hair-like feathers.

Nostril a rather large rounded oval.

Tail composed of 18 feathers, 3rd pair being considerably longer than the middle pair, giving the tail a ∩-shaped appearance when expanded.

Upper tail-coverts much shorter than the tail-feathers.

1st primary much shorter than the 2nd, which is about equal to the 10th; 6th slightly the longest.

Tarsi and feet rather long, the fore part of the tarsus reticulated with small hexagonal scales.

Range. North Celebes and the Sanghir Islands.

1. Megacephalon maleo.

Maleo, *Temm. Pl. Col.* v. in text to pl. 46 [no. 411] (1826) [Celebes].
Megapodius rubripes, *Quoy & Gaim.* (*nec Temm.*) *Voy. Astrolabe, Zool.* i. p. 239, pl. xxv. (1833).
Megacephalon maleo, *Hartl. Verzeichniss.* p. 101 (1844) (descr. nulla); *Gray, List Gen. B.* p. 103 (1855); *Schl. Handl. Dierk.* i. p. 389, *Vog.* pl. v. fig. 64 (1857); *Wallace, Ibis*, 1860, p. 142 [Coast of northern peninsula of Celebes, habits]; *Finsch, Neu-Guin.* p. 180 (1865); *Gray, List Gallinæ Brit. Mus.* p. 18 (1867); *id. Hand-l. B.* ii. p. 254 (1870); *Schl. Dierent.* p. 215, fig. (1872); *Walden, Trans. Zool. Soc.* viii. p. 88 (1872); *Garrod, P. Z. S.* 1873, pp 469. 640, 1875, p. 343; *Salvad. Ann. Mus. Civ. Genov.* vii. p. 673 (1875); *Brügg. Abh. nat. Ver. Brem.* v. p. 88 (1876); *Salvad. Ibis*, 1876, p. 385; *Meyer, Ibis*, 1879, p 139 [Saio, Sanghir Is.]; *Schl. Mus. Pays-Bas*, viii. p. 77 (1880); *Oustal. Ann. Sci. Nat.* xi. p. 2 (1881); *Guillem. P. Z. S.* 1885, p. 559 [Wallace Bay, N. Celebes]; *Blasius, Ornis*, 1888, p. 627 [Siao and Great Sanghir].
Megapodius (Megacephaloma) maleo, *Thienemann, Fortpflanz. aller Vögel*, pt. i. p. 11, pl. iv. fig. 1 (1845).
Megacephalon rubripes, *Gray, Gen. B.* iii. p. 489 (1846); *id. P. Z. S.* 1861, p. 88, 1864, p. 42; *Wallace, Malay Arch.* i. p. 413 (1869).
Megacephalon rufipes, *Gray, Gen. B.* iii. pl. 123 (1846).
Macrocephalon (*sic*) maleo, *Müll. Archiv für Naturg.* xii. pt. 1, p. 116 (1846).

Adult male and female. Head and neck naked with the exception of a few scattered hair-like feathers; top of the head covered with a large rounded casque; plumage of the upper parts, chest, flanks, thighs, and under tail-coverts dark brown, inclining to black on the tail, which is very slightly glossed with dark green; breast and belly beautiful salmon-pink. Casque black; bill at the base of the upper mandible reddish brown, the under mandible and middle of the upper mandible black, point of bill yellowish; skin of the neck blackish; round the eyes of a fleshy yellowish colour; legs bluish black; feet and claws yellowish. Total length 22 inches, wing 11–11·8, tail 5·7–6, tarsus 3·5.

In a *younger example* with the casque less developed, the neck is covered with brown and the chin and throat with white downy feathers.

In a *still younger example* the casque is entirely absent, and the top of the head is covered with brown feathers mixed on the side with white.

Hab. Same as that of the genus.

a. Imm. st.	Celebes.	Zool. Soc. Coll.
b, c. Imm. sk.	Celebes.	Gould Coll.
d. ♂ ad. sk.	Menado, Celebes (*van Duivenbode*).	Tweeddale Coll.
e–g. ♂ ♀ ad. sk.	Menado, Celebes.	A. R. Wallace, Esq. [C.].
h. Skeleton.	Celebes (*A. B. Meyer*).	Salvin-Godman Coll.

Family II. CRACIDÆ.

Oil-gland tufted.

The nest is made either in a tree or on the ground, and the eggs, which are white, are incubated in the usual manner.

Key to the Genera.

I. Upper mandible higher than broad. (*Cracinæ.*)

A. Feathers on the top of the head semi-erect and curled at the extremity . . . 1. CRAX, p. 474.

B. Feathers on the top of the head recumbent.

a. Lores naked . . . . . 2. NOTHOCRAX, p. 484.

b. Lores thickly feathered.

a'. Plumage of sexes similar; culmen more or less elevated, but no egg-shaped tubercle on the forehead . . 3. MITUA, p. 485.

b'. Plumage of sexes different; a very large egg-shaped tubercle on the forehead . . . . . 4. PAUXIS, p. 487.

II. Upper mandible broader than high.

C. With an elevated naked cylindrical occipital helmet; top of the head mostly naked. (*Oreophasinæ.*) . . . . . 5. OREOPHASIS, p. 489.

D. Without an elevated helmet; top of the head covered with feathers. (*Penelopinæ.*)

c. Inner web of outer primaries not very deeply excised at the extremity.

c'. Throat mostly naked, with a median wattle.

a''. Sexes similar . . . . . 6. PENELOPE, p. 490.

b''. Sexes different . . . . . 7. PENELOPINA, p. 502.

d'. A band of feathers down the middle of the throat; no median wattle . . . . . 8. ORTALIS, p. 504.

d. Inner web of outer primaries very deeply excised at the extremity.

e'. Fore part of neck mostly naked; with a short median wattle . . . . 9. PIPILE, p. 516.

f'. Fore part of neck mostly feathered; with a long vermiform wattle . . 10. ABURRIA, p. 519.

g'. Fore part of neck as well as chin and throat entirely feathered; no wattles . . . . . 11. CHAMÆPETES, p. 520.

1. CRAX.

	Type.
Crax, *Linn. S. N.* i. p. 269 (1766)	C. alector.
Mituporanga, *Reichenb. Tauben*, p. 136 (1862)	C. globicera.
Crossolaryngus, *Reichenb. Tauben*, p. 136 (1862)	C. globulosa.
Sphærolaryngus, *Reichenb. Tauben*, p. 136 (1862)	C. alberti.

Feathers of the crest curled forward.
Base of the culmen with or without a swollen knob.
Base of the lower mandible with or without wattles.
Tail composed of 12 feathers.
Tarsus longer than the middle toe and claw.

Range. Central and South America.

Key to the Species.

I. Crest uniform black, never barred with white. (*Males.*)
  A. No swollen knob on the base of the upper mandible, and no wattles on each side of the lower mandible.
    a. Plumage of the upper parts glossed with purple; tail not tipped with white .... *alector*, p. 475.
    b. Plumage of the upper parts glossed with dull green; tail tipped with white .... *fasciolata*, p. 476.
  B. A swollen knob on the base of the upper mandible.
    c. No wattles at the base of the lower mandible.
      a'. Tail not tipped with white ..... *globicera*, p. 478.
      b'. Tail slightly tipped with white ..... *panamensis*, p. 479.
    d. A wattle on each side of the base of the lower mandible.
      c'. Tail not tipped with white.
        a''. Swollen knob and wattles scarlet .. *carunculata*, p. 481.
        b''. Swollen knob and wattles yellow .. *globulosa*, p. 482.
      d'. Tail tipped with white.
        c''. Swollen knob and wattles yellow .. *daubentoni*, p. 482.
        d''. Swollen knob and wattles pale blue. *alberti*, p. 483.

II. Crest always more or less barred with white. (*Females.*)
  C. General colour of the secondaries chestnut.
    e. Tail not barred with white, or, if barred, the bars not perceptible on the under surface of the webs ..... *globicera*, p. 478.
    f. Tail strongly barred with white or pale buff, the bars being as clearly marked on the under surface of the feathers as on the upper ..... *panamensis*, p. 479.
  D. Secondaries widely barred with black and white, the white bars being nearly as wide as the black interspaces (lower back tawny buff, indistinctly barred with black; primaries and tail-feathers marked like the secondaries) ..... *grayi*, p. 480.

E. Secondaries black, with narrow white bars, much narrower than the black interspaces.
g. Outer primaries black barred with white.
e'. Thighs uniform tawny buff: tail-feathers barred like the secondaries..... *fasciolata*, p. 476.
f'. Thighs black barred with buff; tail-feathers not barred with white ..... *pinima*, p. 477.
h. Outer primaries uniform rufous-chestnut.. *alberti*, p. 483.
F. Secondaries uniform black.
i. Tail not tipped with white.
g'. Breast uniform black; belly and under tail-coverts white..... *alector*, p. 475.
h'. Breast black, slightly mottled with buff; belly and under tail-coverts rufous.
e''. Basal half of the mandible scarlet .. *carunculata*, p. 481.
f''. Basal half of the mandible yellow .. *globulosa*, p. 482.
k. Tail tipped with white; breast black barred with white: belly and under tail-coverts white..... *daubentoni*, p. 482.

1. Crax alector.

? Gallus indicus, *Sloane, Jamaica*, ii. p. 302, pl. 260 (1725).
Le Hocco de la Guiane, *Briss. Orn.* i. p. 298, pl. xxix. (1760).
Crax alector, *Linn. S. N.* i. p. 269 (1766); *Gm. S. N.* i. pt. ii. p. 735 (1788); *Lath. Ind. Orn.* ii. p. 622 (1790) [mas.]; *Bonn. Tabl. Encycl. Méth.* i. p. 173, pl. 85. fig. 4 (1791); *Temm. Pig. et Gall.* iii. pp. 27, 689 (1815); *Vieill. Gal. Ois.* ii. p. 6 (1825); *Less. Traité d'Orn.* p. 484, pl. 81. fig. 1 (1831); *Bennett, Gard. and Menag.* ii. p. 9 (1831); *Gray, List of B.* pt. iii. *Gall.* p. 20 (1844); *Cab. in Schomb. Brit. Guiana*, iii. p. 746 (1848); *Burmeister, Syst. Ueb.* iii. p. 344 (1856); *Reichenb. Tauben*, p. 130 (1862); *Gray, List Gallinæ Brit. Mus.* p. 14 (1867); *id. Hand-l. B.* ii. p. 253 (1870); *v. Pelz. Orn. Bras.* p. 286 (1870) [Rio Negro, Rio Vaupè, and Rio Branco]; *Sclat. Trans. Z. S.* ix. p. 277, pl. xliii. (1875); *Brown, Brit. Guiana*, p. 345 (1877).
Crested Curassow, *Lath. Gen. Hist. B.* viii. p. 151 (1823).
Crax mitu, *Vieill. Gal. Ois.* ii. pl. 199 (1825).
Crax sloanei, *Reichenb. Tauben*, p. 131 (1862).
Crax erythrognatha, *Sclat. & Salvin, P. Z. S.* 1877, p. 22 [Colombia]; *Sclat. Trans. Z. S.* x. p. 543, pl. xc. (1879).

Adult male. General colour black glossed with purple, which renders it easily recognizable from the allied species; lower belly, flanks, and under tail-coverts white; lores naked; no swelling on the base of the culmen nor wattles on the base of the lower mandible; cere and base of bill yellow, extremity horny blue; feet horn-coloured. Total length 34 inches, wing 15, tail 13, tarsus 4·5.

Adult female. Resembles the male, but the feathers of the crest have a few white bars. Total length 33 inches, wing 14, tail 12, tarsus 4·3.

Hab. Rio Negro, Rio Branco, Rio Vaupè, British Guiana, U.S. Colombia.

a, *b*. ♂ ♀ ad. sk. Interior of Colombia. Salvin-Godman Coll. (Types of *C. erythrognatha*, Sel. & Salv.)

c. ♂ ad. sk.	S. Gabriel, Upper Rio Negro, Jan. (*Natterer*).	Salvin-Godman Coll.
d. ♀ ad. sk.	Barra do Rio Negro, Sept. (*Natterer*).	Salvin-Godman Coll.
e. ♂ ad. st.	Brit. Guiana.	Purchased.
f, g. ♂ ad. sk.	Brit. Guiana.	Sir R. Schomburgk [C.].
h. ♀ ad. sk.	Camacusa, Brit. Guiana, Aug. (*Whitely*).	Salvin-Godman Coll.
i. ♂ ad. sk.	Demerara, April.	Salvin-Godman Coll.
k. Skeleton.	Surinam.	
l, m. Skeletons.		

2. Crax fasciolata.

El Mitu, *Azara, Apunt.* iii. p. 83, no. 338 (1802) [Paraguay].
Crax fasciolata, *Spix, Av. Bras.* ii. p. 48, pl. lxii. *a* (1825) [Para]; *Gray, List of B.* pt. iii. *Gall.* p. 20 (1844).
Crax alector, *Hartl.* (*nec Linn.*) *Syst. Ind. Azara,* p. 22 (1847); *Burmeister, La-Plata Reise,* ii. p. 500 (1861).
Crax sclateri, *Gray, List Gallinæ Brit. Mus.* p. 14 (1867) (nec spec. *c* and *d*); *id. Hand-l. B.* ii. p. 253 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 515; *v. Pelz. Orn. Bras.* p. 287 (1870) [Matto Grosso]; *Burmeister, P. Z. S.* 1871, p. 701 [Bolivia]; *Sclat. Trans. Z. S.* ix. p. 278 (1875); *Berlepsch, J. f. O.* 1887, p. 34 [Pilcomayo]; *Sclat. & Hudson, Argent. Orn.* ii. p. 145 (1889) [N. Argentina]; *Kerr, Ibis,* 1892, p. 147 [Forests near the Paraguay].
Crax circinatus, *Licht. MS. in Mus. Berol.* (*fide Pelz.*).
Crax discors, *Natterer, MS. in Mus. Berol.* (*fide Pelz.*).
Crax azaræ, *Natterer in Mus. Vindob.* (*fide Pelz.*).

Adult male. Plumage black glossed with dark green; belly, under tail-coverts, and tips of the tail-feathers white; no wattle on the base of the culmen, which is bright yellow; tip of the culmen blackish horn; lores and the space round the eye naked and black; legs and feet pale pink. Total length 30·5 inches, wing 14·3, tail 13·6, tarsus 4.

Adult female. Crest white, tip and base of each feather black; neck black; rest of upper parts black, with narrow white cross-bars, widest on the wing-coverts and quills; lower neck black, barred with buff; upper chest and, in some specimens, the sides of the breast buff, barred with black; the rest of the underparts pale rufous buff, palest on the belly and under tail-coverts; most specimens have the tail black, barred with white, but in what appears to be the most mature specimen the white bars are wanting and the whole of the barring on the upper parts is very narrow; it therefore seems probable that the barring decreases with age. Total length 29 inches, wing 13·2, tail 12·5, tarsus 3·8.

In what appears to be *the least mature female* the white bars on the upper parts and tail are very distinctly wider than in the other specimens.

Hab. South America, ranging north to Para, south to Paraguay, and east to Bolivia.

a. ♂ ad. sk.	[Mexico.]	Purchased. (Types of *C. sclateri*, Gray.)
b. ♀ ad. sk.	S. America.	

c, d. ♀ ad. sk.	S. America, Feb.	Salvin-Godman Coll.
e, f. ♂ ad. et ♀ vix ad. sk.	Rio do Cabaçal, Brazil, Aug. (*Natterer*).	Salvin-Godman Coll.

3. Crax pinima.

Crax pinima, *Natterer, MS., v. Pelz. Orn. Bras.* pp. 287, 341 (1870) [District of Para]; *Gray, Hand-l. B.* ii. p. 253 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 518.

Crax incommoda *, *Sclat. P. Z. S.* 1872, p. 690; *id. Trans. Z. S.* ix. p. 281, pl. xlix. (1875), x. p. 544, pl. xciii. (1879).

Adult male. At present unknown.

Adult female. Differs chiefly from the female of *C. fasciolata* in having the whole of the breast, sides, and thighs black, narrowly barred with whitish buff, the belly whitish buff, and the tail-feathers uniform black, though the middle pair are irregularly marked with white in a younger example. I have little doubt that the three specimens before me all belong to one and the same species, but they differ considerably one from another in plumage, though the differences are probably due to age. In the type the feathers of the crest are black, with a narrow white band across the middle third; the primaries are black, irregularly and narrowly barred with white on both webs, and the fore part of the neck and chest are uniform black.

In a *second and apparently less mature specimen* there are two white bands across the first and second third of each of the crest-feathers; the primaries are equally barred with rufous buff and black; the fore part of the neck is barred with white, and the chest shows traces of the same colour; while the lower parts of the breast are buff, barred with black, and the middle tail-feathers are narrowly and irregularly barred with white.

In *the third example*, which lived for more than four years in the Zoological Society's Gardens, either the natural changes in plumage have not taken place in confinement, or the specimen represents a distinct species: the feathers of the crest resemble those of *C. fasciolata*, being white, widely tipped with black, and black at the base; the primaries (except the outer one) have the inner web uniform black; the fore part of the neck and chest are regularly barred with white, and the middle of the breast is buff barred with black, as in the second example described above. Total length 34·5 inches, wing 15·2, tail 13·5, tarsus 4·1.

Hab. South America, District of Para and ? U.S. of Colombia.

a. ♀ ad. sk.	S. America, July.	Salvin-Godman Coll. (Type of *C. incommoda*, Scl.)

* This species is based on the specimen obtained from the Jardin d'Acclimatation in 1870, and referred to *C. pinima* by Sclater and Salvin in the P. Z. S. 1870, p. 518. Sclater afterwards considered this bird distinct, and described it under the name of *C. incommoda*; but after comparing it carefully with the original description of *C. pinima*, v. Pelz., I am convinced that the original identification was correct.

b. ♀ ad. sk.	S. America, Dec.	Salvin-Godman Coll.
c. ♀ vix ad. sk.	[U.S. Colombia.]	Purchased of M. Verreaux.
d, *e*. ? Skeletons.	[Guiana.]	

4. Crax globicera.

? The Red Peruvian Hen, *Albin, Nat. Hist. B.* iii. p. 37, pl. 40 (1740).
The Curasso Bird, *Edwards, Glean.* ii. p. 181, pl. 295. fig. 1 (1760).
Le Hocco de Curassow, *Briss. Orn.* i. p. 300 (1760).
Le Hocco du Pérou, *Briss. Orn.* i. p. 305 (1760); *D'Aubent. Pl. Enl.* ii. pl. 36 [no. 125].
Crax globicera, *Linn. S. N.* i. p. 270 (1766); *Gm. S. N.* i. pt. ii. p. 736 (1788); *Lath. Ind. Orn.* ii. p. 624 (1790) [♂]; *Bonn. Tabl. Encycl. Méth.* i. p. 175 (1791); *Sclat. P. Z. S.* 1860, p. 253; *Taylor, Ibis*, 1860, p. 311 [Honduras]; *Salvin, Ibis*, 1861, p. 143 [Vera Paz]; *Sclat. & Salvin, P. Z. S.* 1870, pp. 513, 838 [part., Western Mexico to Honduras]; *Sumichrast, La Naturaleza*, ii. p. 37 (1871) [Vera Cruz]; *Sclat. Trans. Z. S.* ix. p. 274, pl. xl. (1875) [part.]; *Boucard, P. Z. S.* 1883, p. 459 [Yucatan]; *Salvin, Ibis*, 1889, p. 378, 1890, p. 89 [Cozumel].
Crax rubra, *Linn. S. N.* i. p. 270 (1766); *Gm. S. N.* i. pt. ii. p. 736 (1788); *Temm. Pig. et Gall.* iii. pp. 21, 687 (1815); *Bennett, Gard. & Menag.* ii. p. 225 (1831).
Le Hocco, *Buff. Hist. Nat. Ois.* ii. p. 373, pls. xiii., xiv. (1771).
Crax alector, *Lath. Ind. Orn.* ii. p. 623 (1790) (femina); *Sclat. & Salvin, Ibis*, 1859, p. 223; *Moore, P. Z. S.* 1859, p. 61 [Peten and Chilomo, Guatemala].
Globose Curassow, *Lath. Gen. Hist. B.* viii. p. 154 (1823).
Red Curassow, var. A, p. 153 [adult ♀], var. B, p. 154 [immature ♀], *Lath. Gen. Hist.* viii. (1823).
Crax blumenbachii, ? *Spix, Av. Bras.* ii. p. 50, pl. lxiv. (1825) [Rio de Janeiro *]; *Gray, List Gallinæ Brit. Mus.* p. 15 (1867); *id. Hand-l. B.* ii. p. 253 (1870).
? Crax albini, *Less. Traité d'Orn.* p. 484 (1831); *Reichenb. Tauben*, p. 135 (1862).
Crax temminckii, *Tschudi, Faun. Per.* p. 287 (1844–46) [Western Mexico]; *Burmeister, Syst. Uebers.* iii. p. 347 (1856).
Crax edwardsii, *Reichenb. Tauben*, p. 134 (1862).
Crax pseudalector, *Reichenb. Tauben*, p. 131, pl. 174. fig. 1516 (1862).

Adult male. Whole of the plumage black glossed with dark green, except the middle of the belly, flanks, and under tail-coverts, which are white; wattle on the basal part of the culmen pale yellow; terminal part of both mandibles blackish horn; legs and feet greyish horn-colour. Total length 35 inches, wing 15·7, tail 14, tarsus 4·6.

An *immature male* has the wattle on the culmen rudimentary; the feathers of the chin, throat, and thighs blackish brown barred with white; otherwise the plumage resembles that of the adult male.

Adult female. Feathers of the top of the head and crest black, with a wide band of white across the middle third; rest of the head, chin, throat, and neck covered with short feathers barred with black and white; feathers of the back of the neck, mantle, and

* The locality is no doubt erroneous.

chest mostly black glossed with green, and washed or margined with rufous; lower back, rump, and upper tail-coverts deep brownish chestnut, indistinctly mottled with black; scapulars and outer secondaries like the feathers of the mantle, but the extremities are brighter rufous and mottled with black: quills and wing-coverts chestnut, thickly mottled with black, especially on the inner webs of the primaries and on the secondaries and their coverts; the outer webs of the secondaries are usually more or less irregularly barred with white, though these markings disappear with age; breast dark chestnut, shading into cinnamon on the lower breast, belly, thighs, and under tail-coverts; tail entirely black, glossed with green in the most adult examples; in the majority of specimens, however, the median tail-feathers are mottled with chestnut and retain traces of the yellowish-white markings of immaturity. Base of both mandibles dark greenish brown, terminal part yellowish; legs and feet dull pinkish grey. Total length 29 inches, wing 14, tail 12, tarsus 4·4.

In *younger female* specimens the crest-feathers are black with several bars of white, while in the youngest examples the feathers are mostly white tipped with black; the wings and tail are largely marked with white lines and irregular bands, while the chest, breast, and thighs are barred with blackish or dark brown.

Hab. Central America, ranging from Western Mexico to Honduras and to Cozumel Island.

a, *b*. ♂ ad. sk.	Sierra Madre, above Ciudad Victoria, Tamaulipas, Mexico (*W. B. Richardson*).	Salvin-Godman Coll.
c. ♀ ad. sk.	Mizantla, Vera Cruz, Oct. (*Ferrari-Perez*).	Salvin-Godman Coll.
d. ♀ imm. sk.	Chimalapa, Tehuantepec, March (*W. B. Richardson*).	Salvin-Godman Coll.
e, *f*. ♂ ♀ ad. sk.	Northern Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
g–i. ♀ imm. sk.	Cozumel Is., Yucatan, May (*G. F. Gaumer*).	Salvin-Godman Coll.
k, *l*. ♀ ad. et imm. sk.	Guatemala.	Purchased of M. Verreaux.
m–r. ♂ ♀ ad. et vix ad. sk.	Savana Grande, Guatemala, Nov. (*O. S.*)	Salvin-Godman and Tweeddale Colls.
s, *t*. ♀ ad. st.	[S. America.]	Purchased.
u, *v*. Skeletons.		Zool. Soc. Coll.

5. Crax panamensis.

? The Curasow Cock and Hen, *Albin*, *Nat. Hist. B.* ii. p. 29, pls. 31, 32 (1738).

Crax globicera, *Lath.* (*nec Linn.*) *Ind. Orn.* iv. p. 624 (1790) [♀]; *Lawr. Ann. Lyc. N. Y.* viii. p. 12 (1867) [U.S. Colombia], ix. p. 139 (1869) [San José, Costa Rica]; *Frantzius. J. f. O.* 1869, p. 373 [Costa Rica]; *Sclat. & Salvin, P. Z. S.* 1870, p. 513 [part., Costa Rica and Panama]; *Sclat. Trans. Z. S.* ix. p. 274 (1875) [part.]; *Boucard, P. Z. S.* 1878, p. 42 [Costa Rica]; *Sclat. Trans.*

Z. S. x. p. 543, pl. lxxxix. (1879); *Richmond, P. U.S. Nat. Mus.* xvi. p. 524 (1893) [Rio Escondido, Nicaragua, and Rio Frio, Costa Rica].

Crax rubra, *Steph.* (*nec Linn.*) *in Shaw's Gen. Zool.* xi. p. 168, pl. ix. (1819); *Lawr. Ann. Lyc. N. Y.* vii. p. 301 (1862) [U.S. Colombia].

Red Curassow, *Lath. Gen. Hist. B.* viii. p. 152, pl. 123 (1823).

Crax alberti, *Fraser, P. Z. S.* 1850, p. 246, pls. xxvii. & xxviii. [part. ♀].

Adult male. Similar in plumage to the male of *C. globicera*, but the tail has a slight white margin, indicating an approach to *C. daubentoni*. Possibly the coloration of the soft part is different. Total length 34·5 inches, wing 14·6, tail 13·3, tarsus 4·2.

Adult female. Differs from the female of *C. globicera* in having no white markings on the wings, and the feathers of the tail regularly barred with yellowish white, these bars being equally conspicuous on the under surface of the feathers; the back of the neck, mantle, and chest are rufous-chestnut, almost devoid of black in the oldest example, while the wing-coverts and secondaries are uniform chestnut without any of the black bars so conspicuous in younger specimens, and the pale bars on the tail are wide and well-defined. Total length 33·3 inches, wing 14·4, tail 13, tarsus 4·6.

A *somewhat younger* example resembles the above, but the black markings on the outer secondaries are still present, although fewer in number, while the pale bars across the tail are rather less marked.

In *still younger* examples, the back of the neck, mantle, and chest are mostly black as in the male, the wing-coverts and secondaries are thickly mottled with black, and the pale bars on the tail-feathers are narrower and less defined.

Hab. Southern Nicaragua and Costa Rica to the United States of Colombia.

a. ♀ vix ad. sk.	Valza, Costa Rica, Feb. (*J. Carmiol*).	Salvin-Godman Coll.
b. ♀ vix ad. sk.	Valza, Costa Rica, Feb.	J. Carmiol, Esq. [C.].
c. ♂ ad. sk.	Panama.	J. McLeannan, Esq. [C.].
d, *e*. ♂ ♀ ad. sk.	Lion Hill, Panama (*J. McLeannan*).	Salvin-Godman Coll.
f. ♀ ad. sk.	South America.	Zool. Soc. Coll.

6. Crax grayi.

Among the specimens mentioned by Gray in his List of the Gallinæ in the Brit. Mus. (1867) are two females (*c* & *d*) from S. America, which he considered as doubtful varieties of his *Crax sclateri* (= *C. fasciolata*, Spix). These two specimens closely resemble one another in plumage, but one has the lesser and median wing-coverts almost devoid of black bars. Both specimens differ from the female of *C. fasciolata* in having the white bars on the wings and tail far wider, and about half the width of the black interspaces, while the quills are equally and widely barred with black and yellowish white; the whole of the lower back, rump, and upper

tail-coverts are buff, somewhat indistinctly barred with black. These specimens are so different from the females of *C. fasciolata* that I have no hesitation in regarding them as distinct, especially as in the genus *Crax* one looks to the females rather than to the males for distinctive specific characters. Total length 32 inches, wing 13·6, tail 12·7, tarsus 3·8.

a, *b*. ♀ ad. sk.	S. America.	Purchased. (Types of the species.)

7. Crax carunculata.

Wattled Curassow, *Lath. Gen. Hist. B.* viii. p. 155 (1823).

Crax carunculata, *Temm. Pig. et Gall.* iii. pp. 44, 690 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 170 (1819); *Sclat. & Salvin, P. Z. S.* 1870, p. 517; *Gray, Hand-l. B.* ii. p. 254 (1870); *Sclat. Trans. Z. S.* ix. p. 279 (1875).

Crax rubrirostris, *Spix, Av. Bras.* ii. p. 51, pl. lxvii. (1825) [Rio to Bahia]; *Max. Beitr. Nat. Bras.* iv. Abth. ii. p. 528 (1833) [S.E. Brazil].

Crax yarrellii, ? *Bennett, Gard. & Menag.* ii. p. 227 (1831) [Rio Marañon]; *Yarrell. P. Z. S.* 1831, p. 33; *Jard. & Selb. Ill. Orn.* n. s. pl. vi. (1836); *Swains. An. in Menag.* p. 188 (1837).

Crax blumenbachii, *Burmeister, Syst. Uebers.* iii. p. 345 (1856) [Rio de Janeiro to Bahia].

Crax globulosa, *Gray, List Gallinæ Brit. Mus.* p. 16 (1867).

Adult male. Plumage similar to that of *C. globicera*, but the lores are naked. A large swollen process on the base of the culmen and a wattle on each side of the base of the lower mandible scarlet; the tip of the beak blackish horn, and the naked skin round the eye dark blue; legs and feet pinkish horn-colour. Total length 32 inches, wing 14·8, tail 13·5, tarsus 4.

Adult female. Differs from the male in having the belly, flanks, and under tail-coverts rufous buff; feathers of the crest indistinctly barred with white; and the swollen process on the culmen and caruncles on the base of the lower mandible absent; soft parts coloured as in the male. Total length 32 inches, wing 14·2, tail 11·9, tarsus 3·9.

Hab. S.E. Brazil: Rio de Janeiro to Bahia *.

a, *b*. ♂ ad. sk. et st.	S. America.	Zool. Soc. Coll.
c. ♀ ad. sk.	Tropical America, June.	Salvin-Godman Coll.
d. ♂ ad. sk.	S.E. Brazil, Jan.	Salvin-Godman Coll.
e. ♂ ad. sk.	Bahia, Brazil.	Sudbury Museum [P.].
f–*h*. Skeletons.		

* Under the name of *Crax globulosa*, Spix, Sclater and Salvin distinguish the birds of the Upper Amazons from *C. carunculata*, Temm., which is found in S.E. Brazil. The only difference is, that in the male of the latter the swollen process on the base of the culmen and the wattles on the base of the lower mandible are pale yellow instead of red. It appears from what Sclater says in his last remarks in the Trans. Zool. Soc. ix. p. 279 that he has never seen *living* specimens of *C. globulosa*, though several examples of *C. carunculata* have been kept from time to time in the Zoological Gardens. I am inclined to believe that *C. globulosa* is merely a synonym of *C. carunculata*, and that the

8. Crax globulosa.

Crax globulosa, *Spix, Av. Bras.* ii. p. 50, pls. lxv., lxvi. (1825) [Rio Solimoes]; *Gray, List of B.* pt. iii. *Gall.* p. 21 (1844); *Reichenb. Tauben*, p. 135 (1862); *Gray, List Gallinæ Brit. Mus.* p. 16 (1867) [part.]; *id. Hand-l. B.* ii. p. 253 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 515 [Pebas & Rio Napo], 1873, p. 307 [Rio Marañon & Rio Ucayali]; *Sclat. Trans. Z. S.* ix. p. 279, pl. xlvi. (1875), x. p. 544, pl. xci. (1879); *Tacz. Orn. Pérou*, iii. p. 264 (1886) [Sarayacu].

Crax globosa, *Burmeister, Syst. Uebers.* iii. p. 346 (1856).

Crax globicera, *Bates, Nat. on the Amazons*, ii. p. 112 (1863) [Upper Amazons].

Adult male. Resembles *C. carunculata*, but differs in having the swollen process at the base of the culmen and the wattles at the base of the lower mandible yellow instead of scarlet. Total length 34 inches, wing 14·7, tail 13·7, tarsus 3·9.

Adult female. Differs from the adult female of *C. carunculata* only in having the basal part of the lower and upper mandibles yellow instead of scarlet.

In an *immature female* specimen the feathers of the throat are barred with white, those of the breast and thighs are slightly vermiculated and mottled with buff, and the outer webs of the wing-coverts and quills are irregularly marked with whitish buff.

Hab. Upper Amazons: Pebas, Rio Napo, Rio Marañon, Rio Ucayali, and Sarayacu.

a. ♀ ad. sk.*	Amazons, Jan.	Salvin-Godman Coll.
b. ♀ vix ad. sk.	Samiria, Upper Amazons, Nov. (*J. Hauxwell*).	Salvin-Godman Coll.

c. Skeleton.

9. Crax daubentoni.

Hoeco, Faisan de la Guiane, *D'Aubent. Pl. Enl.* ii. pl. 35 [no. 86].

Crax globicera, *Temm. (nec Linn.) Pig. et Gall.* iii. pp. 12, 686 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 166 (1819); *Reichenb. Tauben*, p. 133 (1862).

? Crax aldrovandi, *Reichenb. Tauben*, p. 134, Suppl. pl. 272 *b*. fig. 5038 (1862).

Crax daubentoni, *Gray, List Gallinæ Brit. Mus.* p. 15 (1867); *id. Hand-l. B.* ii. p. 253 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 516 [Venezuela]; *Sclat. P. Z. S.* 1870, p. 671 [Tucacas, N. Venezuela]; *id. P. Z. S.* 1871, p. 624; *Summerhayes, P. Z. S.* 1874, p. 420 [Venezuela]; *Sclat. Trans. Z. S.* ix. p. 276, pls. xli., xlii. (1875).

Crax mikani ♂ [*nec* ♀], *v. Pelz. Orn. Bras.* p. 343 (1870).

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supposed difference in the coloration of the soft parts is due to the former species having been described from specimens in which the colour had faded after death, as in dried skins of *C. carunculata* the wattles are always yellow. The fact that the females of these two supposed species are also identical in plumage is additional evidence in favour of considering them to be one and the same.

* This specimen is probably not referable to this species—the whole bill in the living bird being black, the naked skin round the eye dark bluish black, and the legs red: see Sclater, Trans. Z. S. x. p. 544 (1879).

Adult male. Similar to the male of *C. glȯbicera*, but distinguished by having the tail-feathers tipped with white and a pale yellow wattle on each side of the basal part of the mandible; legs and feet greyish horn. Total length 34 inches, wing 15·2, tail 13·5, tarsus 4·6.

Adult female. Differs from the male adult in having the feathers of the crest white at the base, while the breast, sides, and thighs are barred with white, as in the adult female of *C. pinima*; the wing-coverts also are more or less marked with lines of the same colour: cere purplish black; bill black; legs greyish horn. Total length 31·5 inches, wing 14·5, tail 13·5, tarsus 4.

Hab. Venezuela.

a. ♂ ad. sk.	S. America.	Purchased.	(Types of the species.)
b. ♀ ad. sk.	S. America.	Lidth de Jeude Coll.	
c, d. ♀ ad. sk.	S. America.	Zool. Soc. Coll.	
e, f. ♂ ♀ ad. sk.	Venezuela, May, Oct.	Salvin-Godman Coll.	
g. Skeleton.		Zool. Soc. Coll.	

10. Crax alberti.

Crax alberti, *Fraser, P. Z. S.* 1850, p. 246, pls. xxvii., xxviii. (*nec* ♀); *Reichenb. Tauben*, p. 136 (1862); *Gray, List Gallinæ Brit. Mus.* p. 15 (1867); *id. Hand-l. B.* ii. p. 253 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 517 [U.S. Colombia]; *Sclat. Trans. Z. S.* ix. p. 280, pl. xlviii. (1875).

? Crax mikani ♀ [*nec* ♂], *v. Pelz. Orn. Bras.* p. 343 (1870).

Crax viridirostris, *Sclat. Tr. Zool. Soc.* ix. p. 282 (1875), x. p. 544, pl. xcii. (1879); *id. P. Z. S.* 1876, p. 463 [Cartagena].

Adult male. Similar in plumage to the adult male of *C. daubentoni*; the lores are thickly covered with feathers. The basal part of the culmen, which is somewhat swollen, and the wattles on either side of the mandible blue, the remainder of the bill horny yellow; legs and feet grey. Total length 35 inches, wing 16, tail 15, tarsus 4·6.

Adult female. Most nearly resembles the adult of *C. fasciolata*, but is easily distinguished by the nearly black feathers of the crest as well as by the much deeper colour of the underparts and the densely feathered lores. General colour of the head, neck, chest, and upper parts black; each of the feathers of the crest with two white bars; lower part of the mantle, wing-coverts, scapulars, secondaries, and inner primaries, together with the lower back and tail, narrowly barred with white; the six outer primaries bright rufous chestnut, while the seventh and eighth are intermediate in colour between them and the innermost primaries and secondaries; breast chestnut, shading into cinnamon on the belly and under tail-coverts; sides of the breast and thighs more or less barred with black; and all the tail-feathers tipped with white. Total length 32·5 inches, wing 15·2, tail 13·3, tarsus 4·3.

Hab. U.S. Colombia.

a. ♂ ad. sk.	S. America, Oct	Salvin-Godman Coll. (Type of *C. viridirostris*, Scl.*)
b–d. ♂ ♀ ad. st. et sk.	S. America.	Zool. Soc. Coll.
e. ♂ ad. sk.	Colombia, Aug.	Salvin-Godman Coll.
f. ♀ ad. sk.	Vicinity of Bogota (*G. Crowther*).	Salvin-Godman Coll.
g–i. Skeletons.		

Hybrid between Gallus domesticus *and* Crax alberti. *See* p. 348.

2. NOTHOCRAX.

Type.

Nothocrax, *Burmeister, Syst. Uebers.* iii. p. 347 (1856). N. urumutum.

A full crest of long feathers covers the top of the head.

A large space surrounding the eye naked.

Culmen fairly stout and deep, no casque or swollen process at the base.

Tail composed of 12 feathers.

Tarsus longer than the middle toe and claw.

Range. British Guiana, Rio Negro and Upper Amazons, Rio Pastaza, Sarayacu, Yquitos.

1. Nothocrax urumutum.

Crax urumutum, *Spix, Av. Bras.* ii. p. 49, pl. lxii. (1825) [Rio Negro]; *Cab. in Schomb. Brit. Guiana*, iii. p. 746 (1848) [British Guiana]; *Reichenb. Tauben*, p. 132 (1862); *Gray, List Gallinæ Brit. Mus.* p. 16 (1867); *v. Pelz. Orn. Bras.* p. 288 (1870) [Rio Negro]; *Gray, Hand-l. B.* ii. p. 254 (1870).

Urax urumutum, *Burmeister, Syst. Uebers.* iii. p. 347 (1856).

Nothocrax urumutum, *Burmeister, Syst. Uebers.* iii. p. 347 (1856); *Sclat. & Salv. P. Z. S.* 1870, p. 519 [Rio Pastaza, Upper Amazons]; *iid. P. Z. S.* 1873, p. 307; *Sclat. Trans. Z. S.* ix. p. 282, pl. 50 (1875); *id. P. Z. S.* 1877, p. 681 [Upper Amazons]; *id. Trans. Z. S.* x. p. 545, pl. xciv. (1879); *Tacz. Orn. Pérou*, iii. p. 265 (1886) [Yquitos]; *Beddard, P. Z. S.* 1886, p. 321 (woodcut); *Salvin, Ibis*, 1886, p. 174.

Adult male. A full black crest of long feathers covering the top of the head; nape (and feathered parts of the head), throat, neck, and chest chestnut, shading into brownish chestnut on the mantle, which, like the rest of the upper parts, is finely vermiculated all over with black; quills brownish black, the primaries slightly and the secondaries largely vermiculated with rufous buff on the outer web; breast and rest of underparts cinnamon, slightly mottled on the sides with dusky; tail black, tipped with whitish buff, except

* This specimen has been described under the above name as a distinct species on account of the swollen cere and wattles at the base of the lower mandible being pale green instead of blue, but this difference is no doubt merely due to individual variation.

the middle pair of feathers, which are vermiculated towards the margins with rufous buff. Lores and a large naked space surrounding the eye pale yellow above and purplish below; bill scarlet; legs and feet flesh-colour. Total length 24 inches, wing 11·5, tail 9, tarsus 3·5, middle toe and claw 2·9.

Adult female. Differs from the male in having the upper parts and central tail-feathers more coarsely marked with pale rufous buff on a darker ground, while the chest, breast, sides, and thighs are clouded and mottled with dusky; the coloration of the soft parts is similar. Total length 21 inches, wing 10·4, tail 8·8, tarsus 3·4, middle toe and claw 2·8.

Hab. Same as that of the genus.

a. ♂ ad. sk.	S. America.	Eyton Coll.
b–d. ♂ ♀ ad. et pull. sk.	Sarayacu, Ecuador (*Buckley*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Upper Amazons, May.	Salvin-Godman Coll.
f. ♂ ad. st.	Rio Negro.	Purchased.
g, *h*. Skeletons.		Zool. Soc. Coll.

3. MITUA.

Type.

Mitu, *Less. Traité d'Orn.* p. 485 (1831) ..... M. mitu.
Mitua, *Strickl. Ann. Mag. N. H.* vii. p. 36 (1841) ..... M. mitu.

Crest moderate or well developed, and not curled at the extremity.

Culmen much elevated, and sometimes swollen towards the base.

Tail composed of 12 feathers.

Tarsus longer than the middle toe and claw.

Range. S. America.

Key to the Species.

A. Belly and under tail-coverts dark chestnut.
  a. Culmen swollen and elevated; a well-developed occipital crest; tail tipped with white ..... *mitu*, p. 485.
  b. Culmen not much swollen; occipital crest quite short; tail tipped with rufous..... *tomentosa*, p. 486.
B. Belly and under tail-coverts white; culmen not unusually developed; crest fairly well developed; tail tipped with white ..... *salvini*, p. 487.

1. Mitua mitu.

Crax mitu, *Linn. S. N.* i. p. 270 (1766); *Gmel. S. N.* i. pt. ii. p. 736 (1788); *Gray, Hand-l. B.* ii. p. 254 (1870).

Pauxi mitu, *Temm. Pig. et Gall.* iii. pp. 8, 685 (1815); *Gray, List Gallinæ Brit. Mus.* p. 17 (1867).

Ourax mitu, *Cuv. Reg. An.* i. p. 441 (1817); *Steph. in Shaw's Gen. Zool.* xi. p. 175 (1819); *Temm. Pl. Col.* v. pl. 20 [no. 153] (1823); *Bennett, Gard. & Menag.* ii. p. 129 (1831); *Tschudi, Faun. Peruana*, pp. 47, 289 (1844-6) [N.E. & Central Peru]; *v. Pelz. Orn. Bras.* p. 288 (1870) [Para, Rio Madeira, Matto Grosso].

Crax tuberosa, *Spix, Av. Bras.* ii. p. 51, pl. lxvii *a.* (1825) [Rio Solimoës].
Ourax erythrorhynchus, *Swains. Class. B.* ii. p. 352 (1837); *id. An. in Menag.* p. 187 (1837).
Mitu tuberosa, *Gray, List of B.* pt. iii. *Gall.* p. 21 (1844); *Bates, Nat. on the Amazons,* ii. p. 112 (1863) [Rio Tapajos, Cupari Forests, Upper Amazons (rare)].
Urax erythrorhynchus, *Cab. in Schomb. Brit. Guiana,* iii. p. 747 (1848).
Urax mitu, *Burmeister, Syst. Uebers.* iii. p. 349 (1856); *Tacz. P. Z. S.* 1874, p. 558 [Central Peru].
Urax tuberosa, *Burmeister, Syst. Uebers.* iii. p. 348 (1856).
Mitu brasiliensis, *Reichenb. Tauben,* p. 137 (1862).
Mitua tuberosa, *Sclat. & Salvin, P. Z. S.* 1870, p. 520 [Chamicurros, E. Peru]; *Burmeister, P. Z. S.* 1871, p. 701 [Bolivia]; *Sclat. & Salvin, P. Z. S.* 1873, p. 307 [Loreto on the Marañon]; *Sclat. Trans. Z. S.* ix. p. 283, pl. li. (1875) [Loreto R.]; *Salvin, Ibis,* 1886, p. 174; *Tacz. Orn. Pérou,* iii. p. 266 (1886) [Monterico].

Adult male and female. General colour black glossed with blue, the belly and under tail-coverts dark chestnut, tail tipped with white. A well-developed occipital crest; culmen rounded and sharply compressed in front, swollen posteriorly, much deeper than in *M. tomentosa* and *M. salvini*; bill and feet red.

Male. Total length 34 inches, wing 14·5, tail 12, tarsus 4·4, middle toe and claw 3·5.

Hab. British Guiana, Para, Rio Tapajos, Rio Madeira, Matto Grosso, Bolivia, Peru, Rio Marañon, and Upper Amazons.

a, b. Ad. st.	S. America.	E. Cross, Esq. [P.].
c. Ad. sk.	S. America.	Purchased.
d. Ad. sk.	Cosnipata, Peru, Oct.	H. Whitely [C.].
e. ♂ ad. sk.	Lake Toanacan, Rio Solimoes, Jan. (*Natterer*).	Salvin-Godman Coll.

f–h. Skeletons.

2. Mitua tomentosa.

Crax tomentosa, *Spix, Av. Bras.* ii. p. 49, pl. lxiii. (1825) [Rio Negro]; *Gray, Hand-l. B.* ii. p. 254 (1870).
Pauxi tomentosa, *Gray, Gen. B.* iii. p. 487 (1846); *id. List Gallinæ Brit. Mus.* p. 17 (1867).
Urax tomentosa, *Burmeister, Syst. Uebers.* iii. p. 349 (1856); *Cab. in Schomb. Brit. Guiana,* iii. p. 746 (1848).
Mitua tomentosa, *Sclat. & Salvin, P. Z. S.* 1870, p. 520; *Sclat. Trans. Z. S.* ix. p. 280, pl. lii. (1875); *Salvin, Ibis,* 1886, p. 174 [British Guiana].
Ourax tomentosa, *v. Pelz. Orn. Bras.* p. 288 (1870) [Rio Negro, Rio Branco].

Adult male and female. General colour black, glossed with blue in female, or purplish blue in the male; belly, under tail-coverts, outer part of the thighs, and tips of the tail-feathers dark chestnut. Head with only a very short crest.

Male. Total length 35 inches, wing 15; tail 13·3, tarsus 4·8, middle toe and claw 3·8.

Female. Total length 33 inches, wing 14, tail 12, tarsus 4·2, middle toe and claw 3·2.

Hab. Rio Negro, Rio Branco, extending into British Guiana.

a. ♀ ad. sk.	River Rupurumi, Brit. Guiana, Feb. (*H. Whitely*).	Salvin-Godman Coll.
b. ♂ ad. st.	Islands of the Rio Negro, Brazil.	Purchased.
c. ♂ ad. sk.	Marabitanas, Rio Negro, April (*Natterer*).	Salvin-Godman Coll.

d. Skeleton.
e. Imperfect skeleton.

3. Mitua salvini.

Mitua salvini, *Reinhardt, Vid. Medd. Nat. For. Kjöbenhavn*, Jan. 8th, 1879, pp. 1–6; *id. P. Z. S.* 1879, p. 108; *Sclat. P. Z. S.* 1879, p. 109; *id. Trans. Z. S.* x. p. 545, pl. xcv. (1879) [Interior of Brazil ?]; *Reichenow & Schalow, J. f. O.* 1879, p. 310.

Adult male and female. General colour black glossed with blue; lower part of the belly, under tail-coverts, and tip of the tail white; feathers of the crest elongate as in *M. mitu*; lores and sides of the head thickly feathered; bill shaped as in *M. tomentosa*, but rather larger and entirely red; feet red.

Male. Total length 28 inches, wing 14·5, tail (imperfect) 11·7, tarsus 5, middle toe and claw 3·9.

Female. Total length 28 inches, wing 14·5, tail 12·7, tarsus 4·7, middle toe and claw 3·5.

Hab. Sarayacu, Ecuador.

a–d. ♂ ♀ ad. et pull. sk.	Sarayacu, Ecuador (*Buckley*).	Salvin-Godman Coll.

4. PAUXIS.

	Type.
Pauxi, *Temm. Pig. et Gall.* ii. pp. 456, 465, 468 (1813), iii. pp. 1, 683 (1815)	P. pauxi.
Ourax, *Cuv. Règ. An.* i. p. 440 (1817)	P. pauxi.
Lophocerus, *Swains. Class. B.* ii. p. 353 (1837)	P. pauxi.
Urax, *Reichenb. Av. Syst. Nat.* p. xxvi (1852)	P. pauxi.
Pauxis, *Sclater, Trans. Zool. Soc.* ix. p. 285 (1875)	P. pauxi.

A large elevated fig-shaped casque covering the base of the culmen and forehead.

Feathers of the head and neck short and velvety.

Tail composed of 12 feathers.

Tarsus longer than middle toe and claw.

Range. Near Caracas, Venezuela; Santa Martha, U.S. Colombia; Rio Cassiquiari and Orinoco; North-east and Central Peru; ? Cayenne (*Buffon*).

1. Pauxis pauxi.

Le Hocco du Mexique, *Briss. Orn.* i. p. 302 (1760).
Crax pauxi, *Linn. S. N.* i. p. 270 (1766); *Gmel. S. N.* i. pt. ii. p. 737 (1788); *Lath. Ind. Orn.* ii. p. 624 (1790); *Bonn. Tabl. Encycl. Méth.* i. p. 175, pl. 86. fig. 1 (1791); *Vieill. Gal. Ois.* ii. p. 5, pl. 200 (1825).
Le Pierre de Cayenne, *D'Aubent. Pl. Enl.* ii. pl. 37 (no. 78) [Cayenne].
Le Pauxi ou le Pierre, *Buff. Hist. Nat. Ois.* ii. p. 373 (1771).
Crax galeata, *Lath. Ind. Orn.* ii. p. 624 (1790); *Bonn. Tabl. Encycl. Méth.* i. p. 175 (1791); *Gray, Hand-l. B.* ii. p. 254 (1870).
Pauxi galeata, *Temm. Pig. et Gall.* iii. pp. 1, 683 (1815); *Gray, Gen. B.* iii. p. 487, pl. cxxii. (1846); *Reichenb. Tauben*, p. 137 (1862); *Gray, List Gallinæ Brit. Mus.* p. 16 (1867); *Sclat. & Salvin, P. Z. S.* 1870, p. 519 [nr. Caracas, Venezuela, and Santa Martha, U.S. Colombia]; *Summerhayes, P. Z. S.* 1874, p. 420 [Venezuela].
Ourax pauxi, *Cuv. Règ. An.* i. p. 440 (1817); *Bennett, Gard. & Menag.* ii. p. 65 (1831); *Gray, List of B.* pt. iii. *Gall.* p. 21 (1844).
Ourax galeata, *Steph. in Shaw's Gen. Zool.* xi. p. 173 (1819); *Tschudi, Faun. Peruana*, pp. 47, 289 (1844–6) [E. Peru].
Lophocerus galeata, *Swains. Class. B.* ii. p. 353 (1837); *id. An. in Menag.* p. 184 (1837).
Urax pauxi, *Burmeister, Syst. Uebers.* iii. p. 350 (1856).
Ourax (Crax) pauxi, *v. Pelz. Orn. Bras.* p. 289 (1871) [Rio Cassiquiari and Orinoco].
Pauxis galeata, *Sclat. Trans. Z. S.* ix. p. 285, pl. liii. fig. 1 (1875); *Funck, P. Z. S.* 1875, p. 566; *Rowley, P. Z. S.* 1877, p. 684 [egg]; *Sclat. P. Z. S.* 1880, p. 648; *Tacz. Orn. Pérou*, iii. p. 266 (1886) [N.E. and Central Peru].
Pauxis galeata, var. rubra, *Sclat. Trans. Z. S.* ix. p. 285, pl. liii. fig. 2 (1875); *Funck, P. Z. S.* 1875, p. 566.

Adult male. General colour of plumage black glossed with dark green; belly, under tail-coverts, and tip of tail white; feathers on the head and neck short and velvety; a large elevated and fig-shaped slate-blue casque surmounts the base of the culmen and fore part of the head. Bill bright red, legs red. Total length 33·5 inches, wing 14, tail 13·2, tarsus 4·2, middle toe and claw 3·5.

*Adult female**. Head and neck black, as in the male, but the feathers of the chin and throat are mostly pale reddish brown; mantle, wing-coverts, and scapulars chestnut, barred and mottled with shining black and tipped with buff or whitish buff; lower back reddish brown, indistinctly barred with black; upper tail-coverts black, mottled and irregularly barred with rufous buff; quills pale rufous, with oblique markings and mottlings of black; chest rufous, with shining bars of black, shading into paler rufous buff on the breast, sides, and thighs; belly and under tail-coverts white; tail black tipped with white, the central feathers and basal

* Some females resemble the male in plumage, and differ only in being somewhat smaller; but these are apparently abnormal specimens, or barren females which have assumed male plumage.

part of the outer feathers mottled with rufous buff: casque nearly as large as in the male; colour of soft parts apparently similar. Total length 33·5 inches, wing 14·3, tail 13·2, tarsus 4·3, middle toe and claw 3·4.

Hab. Same as that of the genus.

a–c. ♂ ♀ ad. sk. et st.	S. America.	Purchased.
d. ♂ ad. sk.	S. America, July.	Salvin-Godman Coll.

5. OREOPHASIS.

Type.

Oreophasis, *Gray, Gen. B.* iii. p. 485 (1844) ..... O. derbianus.

An elevated, straight, rather slender, cylindrical casque situated on the top of the head between the eyes.

Base of the culmen as far as the nostrils densely covered with velvety feathers.

Tail composed of 12 feathers.

1st primary much the shortest, about half the length of the 5th, which equals the 10th; 7th slightly the longest.

Tarsus very slightly longer than the middle toe and claw.

Range. Woods of Volcan de Fuego, Guatemala.

1. Oreophasis derbianus.

Oreophasis derbianus, *Gray, Gen. B.* iii. p. 485, pl. cxxi. (1844); *Sclat. & Salvin. Ibis*, 1859, p. 224 [Volcan de Fuego, Guatemala]; *Salvin, Ibis*, 1860, pp. 43, 248; *Reichenb. Taubeu*, p. 155, pl. 270, fig. 1508 (1862); *Gray, List Gallinæ Brit. Mus.* p. 14 (1867); *id. Hand-l. B.* ii. p. 253 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 541.

Penelope fronticornis, *Van der Hoev. Handb. der Zool.* ii. p. 435 (1852–56).

Adult male and female. General colour black, glossed with dark green; the basal part of the culmen as far as the nostril, and the fore part and sides of the head, covered with velvety black plumage; a nearly bare patch on the basal part of the throat; fore part of the neck, chest and breast white, each feather with a dark shaft-stripe; sides buff, or buff mixed with brown, and with wide dark centres; rest of the underparts brownish black, more or less glossed on the thighs and under tail-coverts with dark green, and edged with buff about the vent; a wide white band across the middle of the tail; from the crown of the head between the eyes rises a straight, rather slender, cylindrical casque thinly covered with hair-like feathers. The casque, legs, and feet are deep vermilion; bill pale straw-colour; iris white.

Male. Total length 36 inches, wing 15·5, tail 15·2, tarsus 3·6, middle toe and claw 3·4.

Female. Total length 32 inches, wing 14·8, tail 13·6, tarsus 3·3, middle toe and claw 3·2.

Hab. Same as that of the genus.

a–c. Ad. sk. et st.	Guatemala.	Gould Coll.
d. ♀ ad. sk.	Volcan de Fuego, Guatemala.	Purchased.
e–n. ♂ ♀ ad. et imm. sk.	Volcan de Fuego, Guatemala, Jan., Aug., & Dec. (*O. S.*).	Salvin-Godman Coll.
o, *p.* Skeletons.	Volcan de Fuego, Aug.(*O.S.*).	Salvin-Godman Coll.

q. Imperfect skeleton of mounted specimen (*c*).

6. PENELOPE *.

	Type.
Penelope, *Merrem, Beytr. Vögel*, pt. 2, p. 42 (1786); *id. Av. Icones et Descr.* ii. p. 39 (1786)	P. marail.
Salpiza, *Wagler, Isis*, 1832, p. 1226	P. pileata.
Stegnolæma, *Sclat. & Salvin, P. Z. S.* 1870, p. 521	P. montagnii.
Salpizusa, *Heine, Nomencl. Mus. Hein.* p. 301 (1887)	P. argyrotis.

Feathers of the crest fairly elongate, never curled forward.

Nostrils situated rather far forward, and never partially covered with feathers.

A large naked space round the eye.

Chin and throat naked†, with a median wattle.

Tail composed of 12 tail-feathers.

Tarsus longer than or about equal to the middle toe and claw. The feathering at the joint sometimes extends some distance down the tarsus.

Range. Central and South America.

Key to the Species.

I. First eight primaries not white in the middle.
  A. Tail without a distinct terminal band.
    a. Scapulars and secondaries conspicuously margined with rufous on the sides ..... *superciliaris*, p. 491.
    b. Scapulars and secondaries not margined with rufous.
      a'. No well-marked black superciliary stripe contrasting with the sides of the crown.
        a''. Feathers of the cheeks grey, or widely margined with grey.
          a'''. Lower back chestnut.
            a^1. Feathers of the chest and breast margined all round with whitish grey ..... *montagnii*, p. 492.
            b^1. Feathers of the chest and breast margined on the sides only with white ..... *sclateri*, p. 493.

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* Hybrid between *Penelope* sp. and *Gallus domesticus*.
Ad. st. Zool. Soc. Coll.

† In one species, *P. montagnii*, the chin and upper part of the throat are usually, but not always, covered with feathers. On this character Sclater and Salvin, P. Z. S. 1870, p. 521, founded the genus *Stegnolæma*, but as the chin and throat are sometimes nearly naked, and in the nearly allied *P. sclateri* and *P. argyrotis* (which they leave in *Penelope*) these parts are sometimes partially feathered, I do not consider it necessary to retain *Stegnolæma*.

b'''. Lower back dark bluish or bronze green.
*c*⁴. Upper parts glossed with dark olive-green; belly finely mottled with rufous and black; primaries dark, like the secondaries ..... *jacupeba*, p. 494.
*d*⁴. Upper parts glossed with deep bluish green; belly uniform dark brown; terminal part of the outer primaries pale brown .... *marail*, p. 495.
c'''. Lower back brownish bronze .... *ortoni*, p. 496.
b''. Feathers of the cheeks dark brown, never mixed with grey.
d'''. Belly brown.
*e*⁴. Upper parts brownish olive; feathers of the top of the head uniform. Size larger, wing 15 inches..... *purpurascens*, p. 496.
*f*⁴. Upper parts greenish olive; feathers of the top of the head margined with grey. Smaller, wing 11·5 inches ..... *obscura*, p. 497.
e'''. Belly chestnut.
*g*⁴. Crest uniform; white markings on mantle almost, if not quite, absent. Size larger, wing 14·5 inches ..... *cristata*, p. 498.
*h*⁴. Feathers of the crest and mantle margined with whitish grey. Size smaller, wing 12 inches .. *boliviana*, p. 499.
b'. A well-marked black superciliary stripe contrasting strongly with the pale sides of the crown.
c''. Back of the neck dark chestnut, top of the head white with the tips of the longer feathers chestnut; underparts dark chestnut ..... *pileata*, p. 500.
d''. Back of the neck brown or olive, scarcely differing in colour from the mantle; feathers of the crown dark with pale margins.
f'''. Underparts light chestnut..... *ochrogaster*, p. 501.
g'''. Underparts dark brown..... *jacucaca*, p. 501.
B. Tail with a distinct terminal band..... *argyrotis*, p. 501.
II. First eight primaries white, with dusky bases and tips ..... *albipennis*, p. 502.

1. Penelope superciliaris.

Penelope superciliaris, *Illiger*, *Temm. Pig. et Gall.* iii. pp. 72, 693 (1815) [Brazil]; *Steph. in Shaw's Gen. Zool.* xi. p. 186 (1819); *Wagl. Isis*, 1830, p. 1110; *Max. Beitr. Nat. Bras.* iv. p. 539 (1832); *Burmeister*, *Syst. Uebers.* iii. p. 337 (1856) [S.E. Brazil]; *Gray*, *List Gallinæ Brit. Mus.* p. 7 (1867); *id. Hand-l. B.* ii. p. 251 (1870); *Reinhardt*, *Vid. Medd. Kjöbenh.* 1870, p. 53; *Sclat. & Salvin*, *P. Z. S.* 1870, p. 528 [Bahia]; *v. Pelz. Orn. Bras.* p. 282 (1870) [Rio & São Paulo]; *Forbes*, *Ibis*, 1881, p. 357 [N.E. of Quipapa]; *Berlepsch & Ihering*, *Zeit. Ges. Orn.* 1885, p. 178

[Tacquary, Rio Grande do Sul]; *Meyer, Vogel-Skel.* pt. xiv. pl. cxxxviii. (1890): *Allen, Bull. Am. Mus. N. H.* v. p. 149 (1893) [Matto Grosso].

Penelope jacupemba, *Spix, Av. Bras.* ii. p. 55, pl. lxxii. (1825) [Rio].

Salpiza superciliaris, *Wagl. Isis,* 1832, p. 1226; *Gray, List of B.* pt. iii. *Gall.* p. 20 (1844).

Adult male and female. Easily distinguished from all other species of *Penelope* by having the feathers of the wing-coverts and scapulars clearly bordered with light rufous; otherwise the plumage closely resembles that of *P. montagnii*, but the feathers of the top of the head are uniform dark brown, while there is a clearly defined whitish superciliary stripe.

Male. Total length 24 inches, wing 9·6, tail 10·8, tarsus 2·8, middle toe and claw 2·6.

Female. Total length 24 inches, wing 9·8, tail 11·3, tarsus 2·8, middle toe and claw 2·6.

Hab. Brazil: Para, Bahia, Rio, São Paulo, Rio Grande do Sul, Rio Parana, and Matto Grosso.

a. Ad. sk.	Para.	R. Graham, Esq. [P.].
b. Ad. sk.	Capim R., Vicinity of Para, June (*A. R. Wallace*).	Salvin-Godman Coll.
c. Ad. st.	Brazil.	Lord Stuart de Rothesay [P.].
d. Ad. sk.	Brazil.	M. Claussen [P.].
e. Ad. st.	Bahia, Brazil.	Sudbury Museum [P.].
f. Ad. sk.	Bahia, Brazil (*Wucherer*).	Salvin-Godman Coll.
g. Ad. sk.	Rio de Janeiro, Brazil.	Salvin-Godman Coll.
h. ♂ ad. sk.	Ypanema, São Paulo, Brazil, March (*Natterer*).	Salvin-Godman Coll.
i. Ad. sk.	Rio Parana, Brazil (*Rogers*).	Salvin-Godman Coll.
k–m. ♂ ♀ ad. sk.	Chapada, Matto Grosso, June, Oct., Dec. (*H. H. Smith*).	Salvin-Godman Coll.
n. Ad. sk.	(*Zool. Gardens*), Oct.	Salvin-Godman Coll.
o. Ad. sk.	No locality.	Purchased.
p. Ad. sk.	No locality.	Riocour Coll.
q, r. Skeletons.		

2. Penelope montagnii.

Ortalida montagnii, *Bonap. C. R.* xlii. p. 875 (1856) [U. S. Colombia]; *Sclat. P. Z. S.* 1857, p. 19 [Bogota], 1858, pp. 76, 556 [Matos Riobamba], 1860, pp. 63, 72 [Pallatanga]; *Reichenb. Tauben,* p. 147 (1862).

Penelope montagnii, *Gray, List of Gallinæ Brit. Mus.* p. 8 (1867); *id. Hand-l. B.* ii. p. 251 (1870); *Berlepsch & Tacz. P. Z. S.* 1884, p. 312 [W. Ecuador, 9000 ft.].

Stegnolæma montagnii, *Sclat. & Salvin, P. Z. S.* 1870, p. 521, 1875, p. 235 [Merida, Venezuela].

Adult male and female. Head, back, sides of the neck, chin and throat dark brown, each feather margined with pale grey; mantle, wings, and tail olive-brown, sometimes inclining to rufous, and with a greenish gloss; lower back, rump, and upper tail-coverts dark chestnut; a naked patch on the fore part of the neck; chest

and breast olive-brown, each feather margined all round with greyish white; belly and rest of underparts rufous brown. Total length 22 inches, wing 9·5, tail 10, tarsus 2·4, middle toe and claw 2·3.

This species has the chin and throat, as a rule, more or less covered with feathers, and thus differs somewhat from the other members of the genus. It resembles *P. argyrotis* and *P. sclateri* in having the feathering on the legs extending some distance below the joint.

Some specimens in which the wattle on the fore part of the neck is developed have the throat mostly naked or only thinly clad with *black* feathers with elongate hair-like shafts. In specimens exhibiting the above characters, the belly and flanks are more or less distinctly barred with dusky: whether these differences denote age, sex, or season, I am at present unable to say, but I am inclined to believe that they may be characteristic of younger examples.

Hab. Venezuela, U.S. of Colombia, Ecuador.

a, b. ♂ ad. sk.	Sierra Nevada, Merida, Venezuela (*Goering*).	Salvin-Godman Coll.
c, d. Ad. sk.	Int. of U.S. of Colombia.	Salvin-Godman Coll.
e. Ad. sk.	Vicinity of Bogota, U.S.C.	Salvin-Godman Coll.
f. Ad. st.	Ecuador.	Purchased of M. Verreaux.
g, h. Ad. sk.	San José, Ecuador (*Buckley*).	Salvin-Godman Coll.
i. Ad. sk.	Pasto, Ecuador (*Lehmann*).	Salvin-Godman Coll.
k, l. Ad. sk.	No locality.	Purchased.
m. Skeleton.	U.S. Colombia.	Eyton Coll.

3. Penelope sclateri.

Penelope sclateri, *Gray, P. Z. S.* 1860, p. 270; *Reichenb. Tauben*, p. 151 (1862); *Gray, List Gallinæ Brit. Mus.* p. 7 (1867) [Bolivia]; *id. Hand-l. B.* ii. p. 250 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 527; *Sclat. P. Z. S.* 1873, p. 780 [Huasampilla]; *Sclat. & Salvin, P. Z. S.* 1874, p. 679 [Peru]; *Tacz. P. Z. S.* 1874, p. 558 [Central Peru]; *Sclat. & Salvin, P. Z. S.* 1879, p. 640 [Bolivia]; *Tacz. P. Z. S.* 1882, p. 48 [N.E. Peru].

Adult. Easily recognized from *P. montagnii* by having the superciliary stripe and the feathers on the sides of the face whiter and more marked; the lower back, rump, and upper tail-coverts less rufous and browner; the pale edgings on the chest and breast narrower and confined to the sides of the feathers only; the chin and throat almost naked, as in the other species of *Penelope*, though in some specimens the chin and upper part of the throat are partially feathered. Total length 22 inches, wing 9·5 to 10·2, tail 9·4, tarsus 2·4, middle toe and claw 2·3.

A Peruvian bird from Huasampilla differs from typical specimens of *P. sclateri* from Bolivia in having the general colour of the upper parts browner, and the lower back, rump, and upper tail-coverts as well as the belly and underparts darker chestnut. One specimen, however, from Bolivia, very nearly approaches the Peruvian bird in

these respects. As there are no sexed specimens one cannot tell in what respects, if at all, the sexes differ, but the probability is that the smaller birds with the wing about 9·5 are females.

Hab. Peru and Bolivia.

a. Ad. sk.	Huasampilla, Peru, March (*H. Whitely*).	Salvin-Godman Coll.
b–d. Ad. st. et sk.	Bolivia.	T.C.Bridges,Esq.[C.]. (Types of the species.)
e. Ad. sk.	Bolivia (*Bridges*).	Salvin-Godman Coll.
f, g. Ad. sk.	Tilotilo, Prov. Yungas, Bolivia (*Buckley*).	Salvin-Godman Coll.

4. Penelope jacupeba.

Penelope jacupeba, *Spix*, *Av. Bras.* ii. p. 54, pl. 71 (1823) [Para].
Salpiza jacucaca, *Gray*, *List of B.* pt. iii. *Gall.* p. 19 (1844) [spec. *a*].
Salpiza cristata, *Cab. in Schomb. Brit. Guiana*, iii. p. 745 (1848).
Penelope greeyi, *Gray*, *P. Z. S.* 1866, p. 206, pl. xxii. [Sta. Martha, U.S. Colombia]; *id. List of Gallinæ Brit. Mus.* p. 7 (1867); *id. Hand-l. B.* ii. p. 250 (1870); *Sclat. & Salvin*, *P. Z. S.* 1870, p. 523; *Salvin*, *Ibis*, 1886, p. 174 [British Guiana]; *W. L. Sclat. Ibis*, 1887, p. 317.
Penelope cristata, *v. Pelz. Orn. Bras.* p. 280 (1870) [Rio Negro].

Adult male and female. General colour of the upper parts and chest dark glossy olive-green; the feathers of the fore part of the head edged with greyish white, those bordering the sides of the head and covering the cheeks similarly marked, the former making a rather well-marked superciliary stripe: feathers of the back of the neck, mantle, and a few of the wing-coverts indistinctly bordered with whitish grey, those of the fore part of the neck and chest margined on the sides with white; breast and rest of underparts rufous brown, finely mottled with dusky, and slightly glossed with green on the under tail-coverts.

This species is very closely allied to *P. obscura*, from which, however, it may always be distinguished by the grey-edged cheek-feathers and the more marked grey superciliary stripes, which are continued down the sides of the naked throat; it is readily distinguished from *P. marail* by the much lighter and greener colour of the upper parts as well as by the rufous-brown belly.

Male. Total length 29 inches, wing 11·5, tail 12·1, tarsus 2·8, middle toe and claw 2·3.

Female. Total length 26 inches, wing 10, tail 9·6, tarsus 2·3, middle toe and claw 2·3.

Hab. Para, British Guiana, Rio Negro, U.S. Colombia.

a. ♂ ad. sk.	Santa Martha, U.S. of Colombia.	Zool. Soc. Coll. (Type of *P. greeyi*, Gray.)
b. Ad. st.	Brit. Guiana.	Royal Geographical Soc. [P.].
c. ♂ ad. sk.	Brit. Guiana.	Salvin-Godman Coll.

d, *e*. Ad. sk.	Quonga, Brit. Guiana, Sept. (*H. Whitely*).	Salvin-Godman Coll.
f, *g*. ♂ ♀ ad. sk.	Camacusa, Brit. Guiana, April, July (*H. W.*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Bartica Grove, Brit. Guiana, April (*H. W.*).	Salvin-Godman Coll.
i. ♀ ad. sk.	Demerara, May.	Salvin-Godman Coll.

5. Penelope marail.

? Faisan verdâtre de Cayenne, *D'Aubent. Pl. Enl.* ii. pl. 39 [no. 338].
Marail, *Buff. Hist. Nat. Ois.* ii. p. 390 (1771) [Cayenne].
Marail Turkey, *Lath. Gen. Syn.* ii. pt. ii. p. 682 (1783).
? Penelope jacupema, *Merr. Beytr. Vög.* pt. ii. p. 42, pl. xi. (1786); *id. Av. Icones et Descr.* ii. p. 39 (1786).
Penelope marail *, *Gm. S. N.* i. pt. ii. p. 734 (1788); *Bonn. Tabl. Encycl. Méth.* i. p. 171, pl. 84. fig. 4 (1791); *Temm. Pig. et Gall.* iii. pp. 56, 692 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 183 (1819); *Wagl. Isis*, 1830, p. 1110 [Guiana, Cayenne]; *Gray, List Gallinæ Brit. Mus.* p. 6 (1867); *id. Hand-l. B.* ii. p. 250 (1870).
Salpiza marail, *Wagl. Isis*, 1832, p. 1226.
Salpiza jacucaca, *Gray, List of B.* pt. iii. *Gall.* p. 19 (1844) [spec. *b*].
Penelope purpurascens, *J. E. Gray* (*nec Wagl.*), *Knowsl. Menag.* ii. pl. xi. (1846).

Adult male and female. General colour of plumage very dark bluish green, much darker than that of any other species of the genus; top of the head black, with a slight greenish gloss; some of the feathers edged on the sides with grey; the feathers on the forehead, along the sides of the crown, and on the cheeks dark grey; those on the back of the neck and mantle indistinctly margined on the sides with grey; outer half of primaries pale brown, contrasting strongly with the secondaries, and differing in colour from those of any other species of *Penelope*; front of neck and chest margined on the sides with white; rest of underparts brown, glossed with dark green on the thighs and under tail-coverts; outer tail-feathers black, glossed with purple. Total length 32·5 inches, wing 13·5, tail 13·7, tarsus 3·1, middle toe and claw 3.

Hab. British Guiana and Cayenne.

a, *b*. ♀ ad. sk.	Brit. Guiana, March.	Salvin-Godman Coll.
c. Ad. sk.	Brit. Guiana.	Royal Geographical Soc. [P.].
d, *e*. ♂ ♀ ad. sk.	Takutu R., Brit. Guiana, March (*H. Whitely*).	Salvin-Godman Coll.
f. Skeleton.	Guiana.	Purchased.

* It is exceedingly doubtful whether Gmelin's name is really applicable to this species, as it is founded on D'Aubenton's figure (no. 338), which is represented as having the *belly chestnut*. This figure, were it not for the *red* skin surrounding the eye and the fact that the bird is said to have come from Cayenne, might pass fairly well for "*Meleagris cristata*" of Linnæus.

6. Penelope ortoni.

Penelope ortoni, *Salvin, Ibis*, 1874, p. 325 [Pichincha, W. Ecuador]; *Berlepsch & Tacz. P. Z. S.* 1883, pp. 537, 576 [Chimbo, W. Ecuador].

Brownish bronze, scarcely washed with green; top of head darker; the feathers of the breast narrowly margined on the sides with white; these white markings are confined to the pectoral region, and do not extend to the back of the neck as in *P. jacupeba* and *P. marail*. Total length 32 inches, wing 11, tail 9·4, tarsus 2·2, middle toe and claw 2·1.

Hab. Western Ecuador.

7. Penelope purpurascens.

Penelope cristata, *Bonn.* (*nec Linn.*) *Tabl. Encycl. Méth.* i. p. 171, pl. 84. fig. 2 (1791).

Penelope purpurascens, *Wagl. Isis*, 1830, p. 1110; *Sclat. P. Z. S.* 1859, pp. 369, 391 [S. Mexico]; *Sclat. & Salvin, Ibis*, 1859, p. 223 [Central America]; *Moore, P. Z. S.* 1859, p. 61 [Honduras]; *Gray, List Gallinæ Brit. Mus.* p. 6 (1867) [Guatemala]; *id. Hand-l. B.* ii. p. 250 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 522 [Mazatlan, Mexico, Tonila, Oaxaca, Jalapa, Vera Paz]; *Sumichrast, La Naturaleza*, ii. p. 37 (1871) [Vera Cruz]; *Lawr. Mem. Bost. Soc.* ii. p. 306 (1874); *Boucard, P. Z. S.* 1883, pp. 434, 459 [Yak-Jonat, Yucatan]; *Meyer, Vogel-Skel.* pt. xviii. pl. clxxviii. (1892).

Salpiza purpurascens, *Wagl. Isis*, 1832, p. 1226.

Adult male and female. General colour above dull brownish olive glossed with bronze-green, changing to a purplish gloss on the secondaries and upper tail-coverts; top of the head dark brown with a slight purplish gloss; feathers of the mantle margined on the sides with white; lower back and rump brown with a bronze tinge; feathers of the neck, chest, breast, and thighs brown, margined with white on the sides; belly and rest of underparts dull brown; the under tail-coverts with a slight purplish gloss. Total length 34·5 inches, wing 15, tail 14·6, tarsus 3·4, middle toe and claw 3·2.

Immature specimens have the lower back, rump, belly, tail-coverts, and the margins of the tail-feathers mottled with rufous and dusky.

Hab. Mexico, Yucatan, Guatemala, and Honduras.

a–e. ♂ ♀ ad. et imm. sk.	Sierra Madre, above Ciudad Victoria, Tamaulipas, Mexico (*W. B. Richardson*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Santa Anna, River Jalapa, Vera Cruz, Oct. (*Ferrari-Perez*).	Salvin-Godman Coll.
g. ♀ ad. sk.	Hacienda de los Atlixcos, Mexico, March (*F. D. G.*).	Salvin-Godman Coll.
h. ♀ vix ad. sk.	Villa Alta, Oaxaca, Mexico, March (*Trujillo*).	Salvin-Godman Coll.
i. Ad. sk.	Chimalapa, Tehuantepec, March (*W. B. Richardson*).	Salvin-Godman Coll.

k, l. Ad. sk.	Northern Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
m, n. ♀ ad. sk.	Yalahau, Northern Yucatan, Dec. (*G. F. Gaumer*).	Salvin-Godman Coll.
o. Ad. sk.	Guatemala.	Purchased of M. Verreaux.
p. Ad. sk.	Vera Paz, Guatemala.	Salvin-Godman Coll.
q. ♂ ad. sk.	Retalhuleu, Guatemala, Jan. (*W. B. Richardson*).	Salvin-Godman Coll.
r. Ad. sk.	Savana Grande, Guatemala, Nov. (*O. S.*).	Salvin-Godman Coll.
s. ♀ ad. sk.	Volcan de Fuego, Guatemala, Dec. (*O. S.*).	Salvin-Godman Coll.
t. ♂ ad. sk.	Medio Monte, Guatemala, Sept. (*O. S.*).	Salvin-Godman Coll
u. Ad. sk.	Central America.	Salvin-Godman Coll.

8. Penelope obscura.

El Yacúhú, *Azara, Apunt.* iii. p. 72, no. 335 (1802) [Paraguay].

Penelope obscura, *Illiger, Temm. Pig. et Gall.* iii. pp. 68, 693 (1815); *Vieill. N. Dict. d'Hist. Nat.* xxxvi. p. 343 (1819); *Steph. in Shaw's Gen. Zool.* xi. p. 185 (1819); *Vieill. Tabl. Encycl. Méth.* i. p. 361 (1823); *Wagl. Isis*, 1830, p. 1111; *Reichenb. Tauben*, p. 151 (1862); *Gray, Hand-l. B.* ii. p. 251 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 525 [Rio Vermejo, Rio Paraguay], 1879, p. 640 [Bolivia]; *Barrows, Auk*, i. p. 275 (1884) [Lower Uruguay]; *Sclat. & Hudson, Argent. Orn.* ii. p. 146 (1889) [N. Argentine]; *Kerr, Ibis*, 1892, p. 147 [Lower Pilcomayo].

Penelope bridgesi, *Gray, P. Z. S.* 1860, p. 270 [Bolivia]; *Reichenb. Tauben*, p. 151 (1862).

Penelope nigricapilla, *Gray, P. Z. S.* 1860, p. 269 [Brazil]; *Reichenb. Tauben*, p. 152 (1862); *Gray, List Gallinæ Brit. Mus.* p. 7 (1867); *id. Hand-l. B.* ii. p. 250 (1870); *v. Pelz. Orn. Bras.* pp. 281, 341 (1870) [Ytararé, S. Paulo].

Penelope brydgesii, *Gray, List Gallinæ Brit. Mus.* p. 7 (1867); *id. Hand-l. B.* ii. p. 251 (1870).

Penelope jacucaca, *Gray, List Gallinæ Brit. Mus.* p. 8 (1867); *Tacz. Orn. Pérou*, iii. p. 267 (1886).

Penelope jacupeba, *Sclat. & Salvin* (*nec Spix*), *P. Z. S.* 1870, p. 524.

? Penelope pileata, *White, P. Z. S.* 1882, p. 627 [Catamarca, Arg. Rep.].

Adult male and female. General colour of the upper parts and chest olive-brown glossed with green, and washed with copper on the longer scapulars, rump, upper tail-coverts, and middle tail-feathers; feathers of the top of the head dark brown, with whitish-grey margins, most strongly marked on the forehead and along the sides of the crown; feathers of the neck, mantle, wing-coverts, and chest margined on the sides with white; rest of underparts dull reddish brown, indistinctly mottled with pale rufous and dusky. This species may be distinguished from *P. jacupeba* by its dark brown cheek-feathers and by the superciliary stripes being less distinct and not continued behind the ear-coverts. Total length 29·5 inches, wing 11·3, tail 11·7, tarsus 3·3, middle toe and claw 3·2.

In *younger examples* the top of the head is nearly uniform dark

brown, or the edges of the feathers are indistinctly margined with brownish; the upper parts are browner and less glossed with green; and the breast and underparts are more distinctly mottled with pale rufous and dusky.

Hab. Uruguay, Brazil, Rio, São Paulo, Paraguay, N. Argentine, Bolivia.

a. ♂ ad. sk.	Uruguay, Jan.	Alan Peel, Esq. [C.].
b. Ad. sk.	Brazil.	Purchased of M. Verreaux.
c. ♂ vix ad. sk.	Brazil.	M. Claussen [P.]. (Type of *P. nigricapilla*, Gray.)
d. Ad sk.	Rio, Brazil.	Salvin-Godman Coll.
e. Ad. sk.	São Paulo, Brazil (*Natterer*).	Salvin-Godman Coll.
f. Vix ad. sk.	Paraguay (*Page*).	Salvin-Godman Coll.
g. Ad. sk.	Bolivia.	T. C. Bridges, Esq. [C.]. (Type of *P. bridgesi*, Gray.)

9. Penelope cristata.

The Quan or Guan, *Edwards, Nat. Hist. B.* i. p. 13, pl. 13 (1743).
Gallopavo brasiliensis, *Briss. Orn.* i. p. 162 (1760).
Meleagris cristata, *Linn. S. N.* i. p. 269 (1766).
Penelope cristata, *Gm. S. N.* i. pt. ii. p. 733 (1788); *Lath. Ind. Orn.* ii. p. 619 (1790); *Temm. Pig. et Gall.* pp. 46, 691 (1815); *Steph. in Shaw's Gen. Zool.* xi. p. 178 (1819); *Wagl. Isis*, 1830, p. 1110; *Bennett, Gard. & Menag. Z. S.* ii. p. 131 (1831); *Jard. Contr. Orn.* 1848, p. 27, pl. [structure]; *Burmeister, Syst. Uebers.* iii. p. 339 (1856); *Sclat. & Salvin, P. Z. S.* 1870, p. 525, 1879, p. 544 [Antioquia]; *Berlepsch & Taez. P. Z. S.* 1883, p. 576 [Chimbo, W. Ecuador]; *Salvin, Ibis*, 1886, p. 175; *W. L. Sclater, Ibis*, 1887, p. 317 [Corentyn and Orinoco Rivers]; *Richmond, P. U. S. Nat. Mus.* xvi. p. 523 (1893) [Escondido R., Nicaragua].
Salpiza cristata, *Wagl. Isis*, 1832, p. 1226; *Gray, List of B.* pt. iii. *Gall.* p. 19 (1844).
Penelope brasiliensis, *Bonap. C. R.* xlii. p. 877 (1856).
Penelope jacuaca, *Gray, List of Gallinæ Brit. Mus.* p. 6 (1867); *Salvin, Ibis*, 1869, p. 317 [Costa Rica, Panama].
Penelope purpurascens, *Lawr. Ann. Lyc. N. Y.* viii. p. 12 [U.S. Colombia]; *Boucard, P. Z. S.* 1878, p. 42 [Costa Rica].

Adult male and female. General colour of upper parts olive glossed with coppery green; top of the head dark brown slightly glossed with green; unlike *P. boliviana*, the white margins on the feathers of the mantle are almost if not quite absent; lower back, rump, and upper tail-coverts dull chestnut with a slight greenish gloss; the scapulars, secondaries, and centre tail-feathers with a coppery gloss; chest and breast dull olive, each feather margined with white on the sides; belly dull chestnut; thighs olive-brown; under tail-coverts the same, fringed with rufous. Iris carmine; naked skin of throat dull carmine; tarsi and feet coral-red.

In *younger examples* the tail-feathers are washed with rufous and mottled with dusky on the margins of the webs.

Male. Total length 35 inches, wing 14·5, tail 14·5, tarsus 3·7, middle toe and claw 3·4.

Female. Total length 34 inches, wing 13·5, tail 13·5, tarsus 3·4, middle toe and claw 3·2.

Hab. Southern Nicaragua, Costa Rica, Panama, U.S. Colombia, and Ecuador.

a, b. Ad. sk. et st.	S. America.	J. Murray, Esq. [P.].
c, d. ♂ ad. sk.	S. America, Jan.	Salvin-Godman Coll.
e, f. Ad. sk.	S. America.	Purchased.
g, h. ♂ ♀ ad. sk.	Valza, Costa Rica, Feb. (*J. Carmiol*).	Salvin-Godman Coll.
i. Ad. sk.	La Palma, Costa Rica, July (*Zeledon*).	Salvin-Godman Coll.
k. ♂ ad. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
l. Ad. sk.	Lion Hill Station, Panama (*McLeannan*).	Salvin-Godman Coll.
m. Ad. sk.	Vicinity of Bogota, U.S. of Colombia (*Crowther*).	Salvin-Godman Coll.
n. Ad. sk.	Balzar Mts., Ecuador (*Illingworth*).	Salvin-Godman Coll.

10. Penelope boliviana.

? Penelope jacuacu, *Spix, Av. Bras.* ii. p. 52, pl. 68 (1825) [Solimoës].

Penelope boliviana, *Bonap. C. R.* xlii. p. 877 (1856); *Reichenb. Tauben*, p. 151, pl. 271. fig. 2493 (1862); *Gray, List Gallinæ Brit. Mus.* p. 7 (1867); *id. Hand-l. B.* ii. p. 250 (1870); *v. Pelz. Orn. Bras.* pp. 282, 339 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 526 [Yurimaguas]; *Burmeister, P. Z. S.* 1871, p. 701 [Bolivia]; *Sclat. & Salvin, P. Z. S.* 1873, p. 307 [E. Peru]; *Tacz. P. Z. S.* 1874, p. 558 [Central Peru], 1882, p. 48 [N.E. Peru].

Penelope rufescens, *Natt. fide v. Pelz. Orn. Bras.* pp. 282, 339 (1870) [Rio Madeira, Lake Manaqueri, Upper Amazons, and Rio Huallaga].

Penelope jacuaca, *Gray, Hand-l. B.* ii. p. 250 (1870).

Adult male and female. Most nearly allied to *P. cristata*, but distinguished by their smaller size as well as by the following characters:—The crest and back of the neck are dull olive-green, each feather more or less distinctly margined with grey; the feathers of the mantle are very distinctly margined with white on the sides; and the chestnut of the belly extends right up to the chest.

Male. Total length 27 inches, wing 12, tail 13, tarsus 3·3, middle toe and claw 2·9.

Female. Total length 25 inches, wing 10·5, tail 11·2, tarsus 3, middle toe and claw 2·7.

Hab. Brazil, Rio Solimoës, Lake Manaqueri, Rio Madeira, Upper Amazons, Rio Huallaga, Peru, and Bolivia.

a. Ad. sk.	[Para.]	Purchased of M. Verreaux.
b. ♂ ad. sk.	Lake Manaqueri, Rio Solimoës, Dec. (*Natterer*).	Salvin-Godman Coll.
c. ♀ ad. sk.	Yquitos, Upper Amazons, Aug. (*H. Whitely*).	Salvin-Godman Coll.

d, *e*. Ad. sk.	Sarayacu, Ecuador (*Buckley*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Yurimaguas, Peruvian Amazons, Jan. (*E. Bartlett*).	Salvin-Godman Coll.
g. Ad. st.	Bolivia.	T. C. Bridges, Esq. [C.].

11. Penelope pileata.

Penelope pileata, *Wagl. Isis*, 1830, p. 1109 [Para]; *Des Murs, Icon. Orn.* pl. 23 (1845); *J. E. Gray, Knowsl. Menag.* pl 9 (1846) [incorrectly coloured]; *id. List Gallinæ Brit. Mus.* p. 7 (1867); *id. Hand-l. B.* ii. p. 251 (1870); *v. Pelz. Orn. Bras.* pp. 282, 340 (1870) [Rio Madeira, Rio Vautá]; *Sclat. & Salvin, P. Z. S.* 1870, p. 527.
Salpiza pileata, *Wagl. Isis*, 1832, p. 1226; *Gray, List of B.* pt. iii. *Gall.* p. 19 (1844).
Pipile pileata, *Reichenb. Tauben*, p. 153, pl. 271. fig. 2495 (1862).
Penelope leucothrix, *Natterer, fide v. Pelz. Orn. Bras.* pp. 282, 340 (1870).

Adult male and female. Feathers of the top of the head white with dark shaft-stripes, the longer ones rufous or chestnut at the extremity; back and sides of the neck and upper part of the mantle dark chestnut, shading into rich glossy olive-green on the lower parts, wings, and tail; most of the feathers of the mantle and wing-coverts edged on the sides with white; lower back, rump, and upper tail-coverts washed with dark rufous-brown and glossed with green; a narrow black superciliary line borders the white top of the head and extends backwards along the sides of the neck; feathers on the cheeks mostly black; fore part of the neck, chest, and breast dark chestnut, most of the feathers edged along both margins with white; belly and rest of underparts similar in colour, but without white margins.

Male. Total length 31 inches, wing 12·8, tail 13·6, tarsus 3·4, middle toe and claw 3·2.

Female. Total length 30 inches, wing 12·2, tail 13, tarsus 3, middle toe and claw 2·9.

Hab. Brazil: near Para, Rio Madeira, near Barra do Rio Negro, and Rio Vautá.

a. Ad. st.	S. America.	E. Cross, Esq. [P.].
b. Ad. sk.	S. America.	Purchased.
c, *d*. ♀ ad. sk.	Brazil, May, June.	Salvin-Godman Coll.
e, *f*. Skeletons.		

? *Hybrid between* Penelope pileata *and* P. jacucaca.

In the Salvin-Godman collection there is a specimen obtained from the Zoological Gardens, which is stated on the label to have come originally from N. Brazil. It differs chiefly from typical *P. jacucaca* in having the underparts of a deep chestnut, much darker than in *P. pileata*. There can be little doubt that it is a hybrid between the two species.

a. ♂ ad. sk.	N. Brazil, Aug.	Salvin-Godman Coll.

12. Penelope ochrogaster.

Penelope ochrogaster, *Natterer, v. Pelz. Orn. Bras.* pp. 282, 337 (1870) [Cuyaba]; *Gray, Hand-l. B.* ii. p. 251 (1870); *Scl. & Salvin, P. Z. S.* 1870, p. 527.

Adult male. Readily distinguished from *P. pileata*, to which it is most nearly allied, by having the general colour of both upper and under parts decidedly paler; all the feathers on the top of head reddish brown, margined along the sides with whitish; the nape and back of the neck dull olive-brown, faintly washed with rufous, and scarcely differing in colour from the lower parts of the mantle; and the secondaries and middle tail-feathers with a pale rufous tinge. Total length 30 inches, wing 13·3, tail 14·2, tarsus 3·5, middle toe and claw 3·1.

Hab. Brazil: near Cuyaba, Matto Grasso.

a. ♂ ad. sk.	Engenho do Pari, Matto Grosso, June (*Natterer*).	Salvin-Godman Coll. (One of the typical specimens.)

13. Penelope jacucaca.

Penelope jacucaca, *Spix, Av. Bras.* ii. p. 53, pl. 69 (1825) [Bahia]; *Wagl. Isis*, 1830, p. 1110; *Sclat. & Salv. P. Z. S.* 1870. p. 523; *Gray, Hand-l. B.* ii. p. 251 (1870); *Salvin, Ibis*, 1886, p. 175.

Salpiza jacucaca, *Wagl. Isis*, 1832, p. 1226; *Cab. in Schomb. Brit. Guian.* iii. p. 745 (1848).

Penelope superciliaris, *J. E. Gray, Knowsl. Menag.* ii. pl. viii. (1846).

Penelope superciliosa, *Cuv. fide Gray, Hand-l. B.* ii. p. 251 (1870).

Adult male and female. The whole of the plumage brown; the feathers of the middle of the head dark brown; those of the forehead margined on the sides with white; a wide white band borders each side of the head; upper parts slightly washed with dull green; most of the wing-coverts, scapulars, and feathers of the chest and breast edged on the sides with white.

From *P. pileata* and *P. ochrogaster*, to which it is most nearly allied, it is at once distinguished by having the general colour of the underparts brown; it also differs from the former and resembles the latter species in having the back of the neck and upper mantle much the same colour as the rest of the upper parts. Total length 28 inches, wing 11·8, tail 11·1, tarsus 3·2, middle toe and claw 3·2.

Hab. Bahia, Brazil, and British Guiana.

a. ♀ ad. sk.	S. America, March.	Salvin-Godman Coll.
b–d. ♂ ad. et ad. sk.	S.E. Brazil, Jan., Feb., Apr.	Salvin-Godman Coll.
e. Skeleton.		Salvin-Godman Coll.

14. Penelope argyrotis.

Pipile argyrotis, *Bonap. C. R.* xlii. p. 875 (1856) [Caracas].

Penelope montana, *Licht. in Mus. Berol., Bonap. C. R.* xlii. p. 877 (1856); *Reichenb. Tauben*, p. 151 (1862).

Penelope lichtensteinii, *Gray, P. Z. S.* 1860, p. 269 [Venezuela]; *id. List Gallinæ Brit. Mus.* p. 7 (1867)

Penelope argyrotis, *Gray, Hand-l. B.* ii. p. 251 (1870); *Sclat. & Salv. P. Z. S.* 1870, p. 528 [Int. U.S. Colombia, Bogota].

Adult. Differs from all other species of *Penelope* in having the tail-feathers tipped with rufous: it differs chiefly from *P. sclateri*, to which it is otherwise most nearly allied, in having the pale superciliary stripes, as well as those from the angle of the gape to the ear-coverts, whiter and more strongly defined; the edgings of the feathers on the chest and breast, as well as those on the mantle and wing-coverts, pure white. Total length 24 inches, wing 10 to 10·9, tail 10·5, tarsus 2·3, middle toe and claw 2·3.

Two examples from San Lucas, in Ecuador, differ somewhat from the typical Venezuelan example in having the chin and upper part of the throat feathered, the feathers of the belly and underparts rather distinctly mottled with blackish, while the feathers of the mantle and wing-coverts are almost devoid of white margins; these birds are probably younger specimens.

Hab. Venezuela, U.S. of Colombia, and Ecuador.

a. Ad. sk.	Venezuela.	Purchased of M. Verreaux. (Type of *P. lichtensteinii*, Gray.)
b. Ad. sk.	Int. of U.S. Colombia (*Trübner*).	Salvin-Godman Coll.
c, d. Vix ad. sk.	San Lucas, Ecuador (*C. Buckley.*)	Salvin-Godman Coll.

15. Penelope albipennis.

Penelope albipennis, *Tacz. P. Z. S.* 1877, p. 746 [N.W. Peru].

Adult male. Appears to be nearly allied to *P. jacupeba* and *P. ortoni*, but is distinguished from these and all other species of *Penelope* by having the first eight primaries white with the base and tip dusky, and the ninth whitish towards the middle. Wing 13 inches, tail 13, tarsus 3·4, middle toe and claw 3·7.

A single specimen of this species was procured by M. J. Stolzmann near Tumbez, and he states that all the other specimens observed on the wing in this locality had similar white primaries. It would thus appear that this bird is not merely a semi-albino form of *P. ortoni* or some other allied species, as one might naturally be inclined to believe.

Hab. Vicinity of Tumbez, Western Peru.

7. PENELOPINA.

Type.

Penelopina, *Reichenb. Tauben*, p. 152 (1862) ..... P. nigra.

Sexes different.

Tail composed of 12 feathers, rather long and rounded; the outer pair being about two thirds of the length of the middle pair.

1st primary much the shortest; 8th about equal in length to the 10th; 9th slightly the longest.

[In the immature male the wing is quite a different shape; the

1st primary is shorter than the 2nd, which is about equal to the 10th, and the 6th is slightly the longest.]

No crest.

Tarsus longer than the middle toe and claw.

Range. Highlands of Guatemala.

1. Penelopina nigra.

Penelope niger, *Fraser*, *P. Z. S.* 1850, p. 246, pl. xxix.
Penelope nigra, *Sclat. & Salvin*, *Ibis*, 1859, p. 224; *Salvin*, *P. Z. S.* 1867, p. 160 [Volcan de Agua]; *Gray*, *Hand-l. B.* ii. p. 251 (1870).
Penelopina nigra, *Reichenb. Tauben*, p. 152 (1862); *Sclat. & Salvin*, *P. Z. S.* 1870, p. 528 [Guatemala].

Adult male. Whole of the plumage black glossed with dark green or bluish green; the underparts, especially the belly, browner and less strongly glossed. Iris reddish brown; naked space round the eye purple; naked skin of the chin, throat, fore part of neck, and large wattle red; bill, legs, and feet red. Total length 25 inches, wing 9·3, tail 11, tarsus 2·8–3, middle toe and claw 2·6–2·8.

Immature males have the plumage of the upper parts black, irregularly barred with wavy rufous lines, most strongly marked on the upper tail-coverts, and on these parts traces of rufous lines still remain when the rest of the plumage has become black. The underparts are brown, with wavy buff and rufous-buff bars.

Adult female. Top of the head black, each feather edged with brown; those of the back and sides of the neck brown with dark middles; rest of the upper parts somewhat irregularly barred with rufous and black, the latter colour slightly glossed with green on the wing-coverts and tail; the markings are finest on the lower back and coarsest on the upper and under tail-coverts and middle pairs of tail-feathers. Primaries irregularly mottled with buff on the margins of the outer webs. Chest sandy brown, indistinctly mottled with black; breast and sides with irregular concentric bars of rufous buff and dark brown; belly brownish grey, indistinctly mottled with dusky. Soft parts as in the male. Total length 24 inches, wing 9·3, tail 11, tarsus 2·8, middle toe and claw 2·6.

Hab. Same as that of the genus.

a. ♂ ad. st.	Guatemala.	Gould Coll.
b–e. ♂ ad. sk.	Vera Paz, Guatemala (*O. Salvin*).	Salvin-Godman Coll.
f. ♂ imm. sk.	Coban, Vera Paz, Nov. (*O. S.*).	Salvin-Godman Coll.
g. ♂ imm. sk.	El Rincon, San Marcos, Oct. (*W. B. Richardson*).	Salvin-Godman Coll
h. ♀ ad. sk.	Volcan de Agua, Dec. (*O. S.*).	Salvin-Godman Coll.
i–l. ♂ ad. et imm. sk.	Volcan de Fuego, Dec. (*O. S.*).	Salvin-Godman Coll.
m, n. ♂ vix ad. et ♀ ad. sk.	Volcan de Fuego, Dec. (*O. S.*).	Tweeddale Coll.
o–q. ♀ ad. st. et ♂ imm. sk.	Volcan de Fuego (*O. S.*).	Salvin-Godman Coll.

8. ORTALIS*.

	Type.
Ortalis, *Merrem, Av. Icones et Descr.* ii. p. 40 (1786); *Gloger, Hand- u. Hilfsb.* p. 373 (1842); *Wharton, Ibis*, 1879, p. 450	O. motmot.
Ganix, *Rafinesque, Analyse*, p. 69 (1815).	
Ortalida, *auct.*	
Ortaldia, *Flem. Phil. Zool.* ii. p. 230 (1822)	O. motmot.
Penelops, *Reichenb.* (*nec Kaup*, 1829) *Syst. Av.* p. xxvi (1853)	O. albiventris.

Tail composed of 12 feathers, long and rounded, the outer feathers being shorter than the middle pair.

1st primary is much shorter than the 10th, and the 6th is slightly the longest.

A large naked space surrounds the eye; chin and throat naked, with a band of thin feathers with bristle-like shafts down the middle.

Tarsus about equal in length to the middle toe and claw.

Range. Central and South America.

Key to the Species.

A. Outer primaries brown or bronze-brown.
  a. Extremities of the outer tail-feathers chestnut.
    a'. Chest uniform.
      a''. Outer tail-feathers chestnut almost to the base.
        a'''. Top of the head chestnut. Size larger, wing 8·3 — *motmot*, p. 505.
        b'''. Top of the head brown. Size smaller, wing 6·8 — *araucuan*, p. 506.
      b''. Outer tail-feathers with the basal half or more dark, and the remainder chestnut.
        c'''. Top of the head rufous chestnut — *ruficeps*, p. 506.
        d'''. Top of the head grey or brownish grey.
          a^4. Belly chestnut — *wagleri*, p. 507.
          b^4. Belly whitish buff.
            a^5. The five outer pairs of tail-feathers tipped with chestnut — *ruficauda*, p. 507.
            b^5. The two outer pairs of tail-feathers tipped with chestnut — *canicollis*, p. 508.
    b'. Feathers of the chest margined or spotted with whitish at the extremity †.
      c''. Third pair of tail-feathers never widely tipped with chestnut on both webs, no strongly marked superciliary stripe extending backwards down the sides of the head.
        e'''. Top of the head rufous-brown or dark chestnut.

* Doubtful species :—

? Ortalida ? leucophæa, *Licht., Gray, Hand-l. B.* ii. p. 252 (1870).

† In *O. superciliaris* the spots on the feathers of the chest are rather faint and indistinct.

c^1. Feathers of the sides of the face and upper part of the neck pointed and edged with white; belly white .... *albiventris*, p. 508.
d^1. Feathers of the sides of the face and upper part of the neck rounded and uniform olive-brown; belly brownish white ..... *squamata*, p. 509.
f'''. Top of the head dark grey.
e^1. Front of the head whitish; margins of the chest-feathers narrower. Size large, wing 8·8 ..... *caracco*, p. 509.
f^4. Forehead only grey; margins of the chest-feathers wider. Size smaller, wing 7·7 ..... *guttata*, p. 510.
d''. Third pair of tail-feathers widely tipped with chestnut on both webs; superciliary stripe strongly marked and continued backward down the sides of the neck. (Spotting on chest rather faint and indistinct.) ..... *superciliaris*, p. 511.
b. Extremities of the outer tail-feathers white or buff.
c'. Under tail-coverts not white.
e''. Size much larger; wing 9·6, tail 10·8 .. *poliocephala*, p. 511.
f''. Size much smaller; wing 8, tail 9·6 .... *vetula*, p. 512.
d'. Under tail-coverts white ..... *leucogastra*, p. 514.
B. Outer primaries chestnut.
c. Outer tail-feathers tipped with white or buff.
e'. Top of the head chestnut ..... *garrula*, p. 515.
f'. Top of the head grey ..... *cinereiceps*, p. 515.
d. Outer tail-feathers tipped with chestnut..... *erythroptera*, p. 516.

1. Ortalis motmot.

Phasianus guianensis, *Briss. Orn.* i. p. 270, pl. xxvi. fig. 2 (1760).
Phasianus motmot, *Linn. S. N.* i. p. 271 (1766) [Guiana; Brazil]; *Gm. S. N.* i. pt. ii. p. 740 (1788).
Faisan de la Guiane, *D'Aubent. Pl. Enl.* ii. pl. 32 [no. 146].
Phasianus katraca, *Bodd. Tabl. Pl. Enl.* p. 9 (1783).
Phasianus parraka, *Gm. S. N.* i. pt. ii. p. 740 (1788).
Phasianus parraqua, *Lath. Ind. Orn.* ii. p. 632 (1790).
Penelope parrakona, *Temm. Pig. et Gall.* iii. pp. 85, 695 (1815).
Ortalida parrakoua, *Steph. in Shaw's Gen. Zool.* xi. p. 189 (1819).
Penelope motmot, *Wagl. Isis*, 1830, p. 1111.
Ortalida motmot, *Wagl. Isis*, 1832, p. 1227; *Cab. in Schomb. Brit. Guiana*, iii. p. 744 (1848); *Gray, List Gallinæ Brit. Mus.* p. 10 (1867); *id. Hand-l. B.* ii. p. 252 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 532; *v. Pelz. Orn. Bras.* p. 285 (1871) [Rio Negro; Rio Branco]; *id. Ibis*, 1873, p. 119 [Cayenne]; *Brown, Brit. Guiana*, p. 371 (1877) [Wahmana Mts.].
Ortalis parraqua, *Gloger, Hand- u. Hilfsb.* p. 373 (1842).
Ortalida katraca, *Gray, List of B.* pt. iii. *Gall.* p. 20 (1844).
Penelope parrakua, *Burmeister, Syst. Uebers.* iii. p. 341 (1856).
Ortalis motmot, *Salvin, Ibis*, 1886, p. 175 [Bartica Grove and Roraima, British Guiana]; *W. L. Sclater, Ibis*, 1887, p. 317.

Adult male. Top of the head and nape dark chestnut; feathered

parts of the sides of head and fore part of neck similar but paler; rest of upper parts olive-brown, with a rufous tinge in freshly moulted specimens; quills and central pairs of tail-feathers brown with a distinct greenish gloss; outer tail-feathers maroon; chest and breast brownish or olivaceous grey; belly somewhat paler; thighs and under tail-coverts darker, sometimes washed with rufous. Bill slate-colour; iris brown; legs and toes purplish pink. Total length 23 inches, wing 8·3, tail 10·3, tarsus 2·7, middle toe and claw 2·4.

Hab. Cayenne, British Guiana, Rio Negro, and Rio Branco.

a. Ad. sk.	S. America.	Baron Laugier [C.].
b. Ad. sk.	Demerara, British Guiana.	Salvin-Godman Coll.
c. ♂ ad. sk.	Roraima, British Guiana, April (*H. Whitely*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Bartica Grove, British Guiana, Jan. (*H. Whitely*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Rio Negro, Dec. (*Natterer*).	Salvin-Godman Coll.
f, *g.* Skeletons.		Salvin-Godman Coll.

2. Crtalis araucuan.

Penelope araucuan, *Spix*, *Av. Bras.* ii. p. 56 (1825) [Province of Maranhao]; *Wagl. Isis*, 1830, p. 1112.
Penelope aracuan, *Spix*, *Av. Bras.* ii. pl. 74 (1825).
Ortalida araucuan, *Wagl. Isis*, 1832, p. 1227; *Gray*, *List Gallinæ Brit. Mus.* p. 11 (1867); *id. Hand-l. B.* ii. p. 252 (1870); *Sclat. & Salvin*, *P. Z. S.* 1870, p. 533; *Reinhardt*, *Vid. Medd. Kjöbenh.* 1870, p. 4.
Ortalida superciliaris, *Pelz.* (*nec Gray*) *Orn. Bras.* p. 285 (1871) [Para].

Adult male. Very similar to but much smaller than *O. motmot*, from which it also differs in having the top of the head, nape, and feathered parts of the sides of the head dark brown. Total length 17 inches, wing 6·8, tail 8·2, tarsus 1·9, middle toe and claw 1·8.

Hab. Brazil: Province of Maranhao and vicinity of Para.

a. ♂ ad. sk.	Para, Lower Amazons, Oct. (*Natterer*).	Salvin-Godman Coll.
b. Ad. sk.	Para.	R. Graham, Esq. [P.].

3. Ortalis ruficeps.

Penelope ruficeps, *Wagl. Isis*, 1830, p. 1111 [Brazil].
Ortalida ruficeps, *Wagl. Isis*, 1832, p. 1227; *Sclat. & Salvin*, *P. Z. S.* 1870, p. 533; *Gray*, *Hand-l. B.* ii. p. 252 (1870).

This species appears to be closely allied to *O. motmot*, but differs in having the outer tail-feathers blackish, glossed with green and tipped with chestnut, in which respect it resembles *O. wagleri*. Total length 16·25 inches, tail 7·8.

Hab. Brazil.

4. Ortalis wagleri.

Ortalida wagleri, *Gray, List Gallinæ Brit. Mus.* p. 12 (1867) [Mexico]; *id. Hand-l. B.* ii. p. 272 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 534 [Mazatlan, W. Mexico]; *Lawr. Mem. Bost. Soc.* ii. p. 306 (1874).

Adult male and female. Top of the head brownish black, shading into dark grey on the nape; superciliary stripe, feathered parts of the sides of the head, and middle of the throat paler grey; upper parts and rest of neck and chest greyish olive; quills dusky, glossed with bronze-green; breast and rest of underparts chestnut; two middle pairs of tail-feathers glossed with dark bluish green and the four outer pairs widely tipped with dark chestnut. Iris dark brown; bare space round eye red and blue; bare sides of throat red; feet grey. Total length 25·5 inches, wing 9·5, tail 10·5, tarsus 3, middle toe and claw 3.

Hab. Western Mexico, Sinaloa, and Territory of Tepic.

a, b. Ad. sk.	W. Mexico.	Purchased. (Types of the species.)
c, d. ♂ ♀ ad. sk.	Presidio de Mazatlan, Sinaloa, Mexico, March (*A. Forrer*).	Salvin-Godman Coll.
e–h. ♂ ♀ ad. sk.	San Blas, Territory of Tepic, Jalisco, May (*W. B. Richardson*).	Salvin-Godman Coll.
i. ♀ ad. sk.	Santiago, Terr. of Tepic, May (*W. B. R.*).	Salvin-Godman Coll.

5. Ortalis ruficauda.

Ortalida ruficauda, *Jard. Ann. Mag. N. H.* xx. p. 374 (1847) [Tobago]; *id. Contr. Orn.* 1848, p. 16, pl. [structure]; *Gray, Hand-l. B.* ii. p. 252 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 334; *Sclat. P. Z. S.* 1870, p. 796 [Tobago].

Ortalida bronzina, *Gray, List Gallinæ Brit. Mus.* p. 11 (1867) [Venezuela]; *id. Hand-l. B.* ii. p. 252 (1870).

Ortalis ruficauda, *Berlepsch, Ibis*, 1884, p. 440 [Rio Apure and Rio Orinoco, Venezuela].

Adult male and female. Differ from *O. wagleri* in having the top of the head and nape uniform dark grey; chest brownish grey, shading gradually into pale brownish buff on the breast and belly; thighs pale rufous buff; under tail-coverts chestnut.

Male. Total length 24 inches, wing 8·6, tail 10, tarsus 2·5, middle toe and claw 2·4.

Female. Total length 22 inches, wing 8·2, tail 8·9, tarsus 2·5, middle toe and claw 2·4.

Hab. Tobago and Venezuela.

a. ♂ ad. sk.	Venezuela (*Spence*).	Salvin-Godman Coll.
b. Ad. sk.	Venezuela.	Purchased of M. Verreaux.
c, d. Ad. sk.	I. of Tobago.	Salvin-Godman Coll.
e. ♀ ad. sk.	I. of Tobago (*Kirk*).	Salvin-Godman Coll.
f, g. Ad. sk.	Becquia, Grenadine Is., Feb., May (*D. W. Smith*).	Salvin-Godman Coll.
h, i. Skeletons.	I. of Tobago.	Salvin-Godman Coll.

6. Ortalis canicollis.

El Yacu-caraguatá, *Azara, Apunt.* iii. p. 77, no. 336 (1802).
Penelope canicollis, *Wagl. Isis*, 1830, p. 1112 [Paraguay]; *Burmeister, Reise La Plata*, ii. p. 499 (1861).
Ortalida canicollis, *Wagl. Isis*, 1832, p. 1227; *Hartl. Syst. Ind. Azara*, p. 22 (1847); *Gray, Hand-l. B.* ii. p. 252 (1870); *v. Pelz. Orn. Bras.* p. 286 (1870) [Villa Maria, Upper Paraguay]; *Sclat. & Salvin, P. Z. S.* 1870, p. 534 [Rio Parana & Rio Vermejo]; *Burmeister, P. Z. S.* 1871, p. 701 [Tucuman].
Penelope caraguata, *Natterer MS., fide v. Pelz. Orn. Bras.* p. 286 (1870).
Ortalis canicollis, *Salvin, Ibis*, 1880, p. 363 [Tucuman and Salta, Arg. Rep.]; *Berlepsch, J. f. O.* 1887, p. 125; *Sclat. & Hudson, Arg. Orn.* ii. p. 147 (1889) [Paraguay & N. Argentine]; *Kerr, Ibis*, 1892, p. 148 [Lower Pilcomayo].
Ortalida guttata, *White, P. Z. S.* 1882, p. 627 [Salta].
Ortalis guttata, *Berlepsch, J. f. O.* 1887, p. 133.

Adult. Very similar to *O. ruficauda*, but the chest and upper breast are darker and of a more olive-grey colour, and the chestnut tips of the outer tail-feathers are much wider and only developed on the two outer pairs, whereas in *O. ruficauda* all the tail-feathers except the middle ones are tipped with chestnut. Total length 20 inches, wing 8·8, tail 9·9, tarsus 2·35, middle toe and claw 2·35.

Hab. Paraguay, Rio Parana, Rio Vermejo, Lower Pilcomayo, Salta and Tucuman, Argentine Rep., Villa Maria, Upper Paraguay.

a. ♀ ad. sk.	Tucuman, Argentine Republic, June.	H. Durnford, Esq. [C.].
b. ♀ ad. sk.	Salta, Argentine Republic, June.	H. Durnford, Esq. [C.].

7. Ortalis albiventris.

Penelope albiventris, *Wagl. Isis*, 1830, p. 1111.
Ortalida albiventris, *Wagl. Isis*, 1832, p. 1227; *Gray, List Gallinæ Brit. Mus.* p. 12 (1867); *id. Hand-l. B.* ii. p. 252 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 535.
Penelope aracuan, *Max. (nec Spix) Beitr. Nat. Bras.* iv. Abth. ii. p. 549 (1833) [Bahia, Minas Geraës]; *Burmeister, Syst. Uebers.* iii. p. 340 (1856).
Ortalida araucuan, *Gray, List of B.* pt. iii. *Gall.* p. 20 (1844).
Penelops albiventris, *Reichenb. Syst Av.* p. xxvi (1853).
Ortalida aracuan, *v. Pelz. Orn. Bras.* p. 285 (1870) [Bahia].
Ortalis albiventris, *Forbes, Ibis*, 1881, p. 357 [Macuca, Pernambuco, N.E. Brazil].

Adult. Top of the head and nape brownish chestnut, most of the feathers, especially those on the forehead, superciliary stripes, and sides of the face rufous or rufous-buff; back of the neck, mantle, wings, and upper tail-coverts olive-brown, with a slight bronze or purplish gloss in freshly moulted specimens; lower back and rump mostly chestnut, rather browner down the middle; a line

of black bristle-like feathers down the middle of the chin and throat; neck, chest, and upper breast brown tinged with olive, each feather with a rather wide whitish margin; lower breast and belly white; thighs and under tail-coverts dull rufous grey, some of the latter tipped with rufous; the three middle pairs of tail-feathers glossed with dark olive-green, the outer pairs with the basal parts similar, and the terminal half dark chestnut. In some specimens the third pair are also tipped with chestnut. Total length 19 inches, wing 7, tail 8·5, tarsus 2·2, middle toe and claw 2·2.

In what appear to be *less mature birds* the crown of the head is olive-brown or only slightly tinged with rufous, and the lower breast and belly are less pure white.

Hab. S.E. Brazil: Provs. of Pernambuco, Bahia, and Minas Geraës.

a, b. Ad. st. et sk.	Brazil.	Gould Coll.
c, d. Ad. sk.	Brazil, June.	Salvin-Godman Coll.
e. Ad. sk.	Brazil.	Baron Laugier [C.].
f. ♂ vix ad. sk.	Para.	Purchased of M. Verreaux.
g–l. Ad. et vix ad. sk.	Bahia, Brazil (*Wucherer*).	Salvin-Godman Coll.

8. Ortalis squamata.

Ortalida squamata, *Less. Dict. Sci. Nat.* lix. p. 195 (1829); *id. Traité d'Orn.* p. 481 (1831); *Gray, List Gallinæ Brit. Mus.* p. 10 (1867); *id. Hand-l. B.* ii. p. 252 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 535 [Brazil, Prov. of Sta. Catherina?]; *Berlepsch & Ihering, Zeit. ges. Orn.* 1885, p. 179 [Rio Grande do Sul].

Adult. Very closely allied to, if not identical with, *O. albiventris*, from which it apparently differs in having the feathers of the sides of the face and upper part of the neck rather rounded and olive-brown, whereas in *O. albiventris* they are more pointed, of a greyish colour, and whitish at their extremity. The belly and underparts of the body are darker, as in *O. guttata*.

In adopting Lesson's name for this bird I have followed Gray, and Sclater and Salvin, but it is exceedingly doubtful what bird he really referred to, and his description might equally apply to one of the other allied species.

Hab. S. Brazil: Provinces of Rio Grande do Sul and ? Sta. Catherina.

a. Ad. sk.	Brazil.	Purchased.

9. Ortalis caracco.

Penelope sp., *Poeppig, Froriep's Notiz.* 1831, no. 681, *Beil.* p. 8 [Upper Amazonia].

Ortalida caracco, *Wagl. Isis*, 1832, p. 1227; *Gray, Hand-l. B.* ii. p. 252 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 536 [U.S. Colombia].

Ortalida adspersa, *Gray, List Gallinæ Brit. Mus.* p. 13 (1867); *id. Hand-l. B.* ii. p. 252 (1870).

Adult. Very nearly allied to *O. guttata*, but can be distinguished by having the forehead whitish grey; the feathers of the chest and upper breast rather narrowly margined all round with whitish; the lower back and rump brownish olive, scarcely differing in colour from the mantle; and by its greater size. Total length 22 inches, wing 8·8, tail 10·5, tarsus 2·4, middle toe and claw 2·4.

Hab. U.S. of Colombia and Upper Amazonia.

a. Ad. sk.	[Brazil.]	Purchased.
b. Ad. sk.	U.S. of Colombia.	Salvin-Godman Coll.
c. Ad. sk.	Concordia, Antioquia (*T. K. Salmon*).	Salvin-Godman Coll.

10. Ortalis guttata.

Penelope guttata, *Spix, Av. Bras.* ii. p. 55, pl. 73 (1825) [Rio Solimoës]; *Wagl. Isis*, 1830, p. 1112; *Burmeister, Syst. Uebers.* iii. p. 341 (1856).

Ortalida guttata, *Wagl. Isis*, 1832, p. 1227; *Sclat. P. Z. S.* 1858, p. 76 [Rio Napo]; *Gray, List Gallinæ Brit. Mus.* p. 11 (1867); *Sclat. & Salvin, P. Z. S.* 1869, p. 598 [Cosnipata, Peru]; *Gray, Hand-l. B.* ii. p. 252 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 536 [Bogota, Bolivia]; *Burmeister, P. Z. S.* 1871, p. 701 [Santa Cruz de la Sierra, Bolivia]; *Sclat. & Salvin, P. Z. S.* 1879, p. 544 [Antioquia], p. 640 [Tilotilo, Bolivia]; *Tacz. P. Z. S.* 1882, p. 56 [Chirimoto, N.E. Peru]; *id. Orn. Pérou*, iii. p. 278 (1886) [Monterico].

Penelope adspersa, *Tschudi, Wiegm. Arch.* 1843, p. 386 [E. Peru]; *id. Faun. Peruana, Aves*, p. 290 (1845–6).

Penelope maculata, *Natterer, MS., fide v. Pelz. Orn. Bras.* p. 286 (1870).

Ortalida albiventris, *v. Pelz. Orn. Bras.* p. 286 (1870) [Matto-Grosso; Rio Madeira].

Adult. Very closely allied to *O. albiventris*, but apparently the top of the head is always dark greyish brown or greyish black, never brownish chestnut; while the underparts are darker and of a brownish-white colour. The lower back and rump in specimens from Bolivia are distinctly browner and less rufous; but specimens from the Upper Amazons and U.S. of Colombia are quite intermediate in this respect. Total length 19 inches, wing 7·7, tail 9, tarsus 2·3, middle toe and claw 2·3.

It seems to me exceedingly doubtful whether the present species is worthy of specific rank, as with a larger series from intermediate localities the two extremes will probably be found to completely intergrade.

Hab. Upper Amazons, U.S. Colombia, Ecuador, Peru, Bolivia, Matto Grosso, and Rio Madeira.

a. Ad. sk.	Vicinity of Bogota, U. S. Colombia.	Salvin-Godman Coll.
b. Ad. sk.	Sarayacu, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Yquitos, Upper Amazons, July (*H. Whitely*).	Salvin-Godman Coll.
d. Ad. sk.	E. Peru (*Tschudi*).	Salvin-Godman Coll.

(Typical example of *P. adspersa*, Tschudi.)

e, *f*. Ad. sk.	Tilotilo, Prov. Yungas, Bolivia (*C. Buckley*).	Salvin-Godman Coll.
g. Ad. sk.	Int. of Bolivia (*Bridges*).	Eyton Coll.
h–k. Ad. sk. et vix ad. st.	Bolivia.	T. C. Bridges, Esq. [C.].
l. ♂ ad. sk.	Matto Grosso, Brazil, Sept. (*Natterer*).	Salvin-Godman Coll.

11. Ortalis superciliaris.

Ortalida superciliaris, *Gray, List Gallinæ Brit. Mus.* p. 10 (1867); *id. Hand-l. B.* ii. p. 252 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 537.

Adult. Closely allied to *O. guttata*, but smaller, and differing in having a wide white superciliary stripe produced backwards along the sides of the neck above the ear-coverts; lower back and rump dark olive-brown like the mantle, in which respect it resembles *O. caracco*; the chest and upper breast have an indistinct whitish spot at the extremity of each feather; the four outer pairs of tail-feathers are tipped with chestnut, the third pair being almost as widely tipped as the fourth, and in this respect differing from the other allied species, which rarely have any chestnut on the third pair, and then only a small patch at the extremity. This species is also very closely allied to *O. araucuan*, and resembles it in size, but is distinguishable by its white eyebrows and indistinctly spotted breast. Total length about 17 inches, wing 6·8, tail 7·2, tarsus 1·8, middle toe and claw 1·8.

Hab. S. America.

a. ♂ ad. sk.	S. America.	Zool. Soc. Coll.	(Type of the species.)

12. Ortalis poliocephala.

Penelope poliocephala, *Wagl. Isis*, 1830, p. 1112 [Mexico].
Ortalida poliocephala, *Wagl. Isis*, 1832, p. 1227; *Sclat. & Salvin, P. Z. S.* 1869, p. 364 [Mexico]; *iid. P. Z. S.* 1870, p. 537 [Real Arriba, Vera Cruz, Rio Armeria, and Rio Tupila]; *Gray, Hand-l. B.* ii. p. 252 (1870); *Lawr. Mem. Bost. Soc.* ii. p. 306 (1874).
Ortalida leucogastra, *Sclat.* (*nec Gould*) *P. Z. S.* 1859, p. 391 [Oaxaca].

Adult male and female. Ground-colour of the upper parts and chest greyish olive; top of the head and neck dark grey; breast and belly white, shading into rufous buff on the thighs, flanks, and under tail-coverts: tail black glossed with dull greyish green, all the feathers widely tipped with pale rufous-buff. Total length about 25 inches, wing 9·6, tail 10·8, tarsus 2·8, middle toe and claw 2·8.

Hab. Mexico: Rio Armeria, Rio Tupila, Real Arriba, Vera Cruz, Oaxaca, and Tehuantepec.

a. ♀ ad. sk.	Mexico (*Le Strange*).		Salvin-Godman Coll.

b. ♂ ad. sk.	Tehuantepec, Feb. (*W. B. Richardson*).		Salvin-Godman Coll.
c. ♀ ad. sk.	Salina Cruz, Tehuantepec, Feb. (*W. B. R.*).		Salvin-Godman Coll.

13. Ortalis vetula.

? Penelope vociferans, *Gmel. S. N.* i. pt. ii. p. 735 (1788) [Mexico]; *Lath. Ind. Orn.* ii. p. 625 (1790); *Bonn. Tabl. Encycl. Méth.* p. 172 (1791).

Penelope vetula, *Wagl. Isis*, 1830, p. 1112 [Mexico].

Ortalida vetula, *Wagl. Isis*, 1832, p. 1227; *Gray, List of B.* pt. iii. *Gall.* p. 20 (1844); *Lawr. Ann. Lyc. N. York*, v. p. 116 (1852); *Sclat. & Salvin, Ibis*, 1859, p. 224; *Moore, P. Z. S.* 1859, p. 62 [Omoa, N. Honduras]; *Sclat P. Z. S.* 1859, p. 391 [N.E. Oaxaca]; *Taylor, Ibis*, 1860, p. 311 [Honduras]; *Gray, List Gallinæ Brit. Mus.* p. 11 (1867); *id. Hand-l. B.* ii. p. 252 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 538 [Yucatan]; *Sumichrast, La Naturaleza*, ii. p. 37 (1871) [Vera Cruz].

Ortalida poliocephala, *Sclat.* (*nec Wagl.*) *P. Z. S.* 1856, p. 310 [Cordoba, Vera Cruz, Mexico]; *Cassin, Illustr.* p. 267, pl. 44 (1862) [Texas].

Ortalida maccalli, *Baird, B. N. Amer.* p. 611 (1860) [Nuevo Leon, Mexico]; *Dresser, Ibis*, 1866, p. 24 [S. Texas]; *Lawr. Ann. Lyc. N. Y.* ix. p. 209 (1870) [Texas].

Ortalida plumbiceps, *Gray, List Gallinæ Brit. Mus.* p. 11 (1867) [Honduras, Guatemala]; *id. Hand-l. B.* ii. p. 252 (1870).

Ortalida ruficrissa, *Sclat. & Salvin, P. Z. S.* 1870, p. 538 [Sta. Marta, U.S.C.].

Ortalis vetula, *Boucard, P. Z. S.* 1883, p. 460 [Yucatan]; *Salvin, Ibis*, 1889, p. 378, 1890, p. 89 [Meco & Holbox Is., Yucatan Coast].

Ortalis vetula maccalli, *Coues, Key to N. Am. B.* p. 573 (1884); *Herrera, La Naturaleza*, (2) i. p. 278 (1889); *Bendire, N. Am. B.* p. 119, pl. iii. fig. 16 (1892) [Vera Cruz north to Lower Rio Grande Valley].

Ortalis vetula pallidiventris, *Ridgw. Man. N. Am. B.* p. 209 (1887) [Yucatan].

Different names have been applied to this species in different parts of its range, but from the series now before me it is quite clear that all these supposed species are merely slight climatic varieties of one and the same bird.

Gray has distinguished the birds from Guatemala and British Honduras under the name of *O. plumbiceps*, and they are supposed to differ from typical *O. vetula* from Mexico chiefly in having the tips of the five outer pairs of tail-feathers fulvous instead of pure white; but among our series I find two specimens from Teapa in the State of Guerrero, S. Mexico, which so closely approach the Guatemalan birds in this respect that it would be impossible to separate them, while several other Mexican birds have dirty whitish tips to the outer tail-feathers.

Again, Sclater and Salvin have described a bird from the Valle Dupar, Sta. Marta, U.S.C., as *O. ruficrissa*, on account of its rufous vent and under tail-coverts, but it is exactly similar to a specimen from La Antigua, Vera Cruz, W. Mexico, and many other Mexican

specimens approach it in the rufous colour of their under tail-coverts.

The Yucatan bird is a somewhat paler form, and Ridgway has distinguished it as subspecifically distinct under the name of *O. vetula pallidiventris*; but a specimen from Brownsville, Texas, is quite as pale and perfectly similar to Yucatan birds.

Lastly, the North-eastern Mexican bird has been named by Baird as *O. maccalli*, but specimens from this locality are typical *O. vetula*, Wagl.

On the whole, I do not think it possible that any of the above forms can be considered even subspecifically distinct from typical *O. vetula*. If any had a right to be so considered it would be the *O. plumbiceps*, Gray.

Adult. Differs from the adult of *O. poliocephala* in its much smaller size and in having the head and neck less grey. Total length 20 inches, wing 8, tail 9·6, tarsus 2·5, middle toe and claw 2·5.

The coloration of the underparts of the body is subject to considerable variation.

Hab. Southern Texas, ranging through Western Mexico and Central America to the United States of Colombia.

a. ♂ ad. sk.	Brownsville, Texas, March (*F. B. Armstrong*).	Salvin-Godman Coll.
b, c. Ad. sk.	Mexico.	Purchased of M. Verreaux.
d. Ad. st.	Mexico.	Baron Laugier [C.].
e, f. ♂ ad. sk.	Sierra Madre, above Ciudad Victoria, Tamaulipas (*W. B. Richardson*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Aldama, Tamaulipas, March (*W. B. R.*).	Salvin-Godman Coll.
h–m. ♀ ad. sk.	Tampico, Feb., June (*W. B. R.*).	Salvin-Godman Coll.
n. ♀ ad. sk.	Valles, San Luis Potosi, May (*W. B. R.*).	Salvin-Godman Coll.
o, p. ♂ ♀ ad. sk.	Vera Cruz, Nov.	Salvin-Godman Coll.
q. ♀ ad. sk.	Vera Cruz, Feb. (*W. B. R.*).	Salvin-Godman Coll.
r. Pull. sk.	Cuesta de Misantla, June (*M. Trujillo*).	Salvin-Godman Coll.
s. Ad. sk.	Jalapa (*C. F. Höge*).	Salvin-Godman Coll.
t, u. ♂ ♀ ad. sk.	Plan del Rio (Canton de Jalapa), July, Oct. (*Ferrari-Perez*).	Salvin-Godman Coll.
v–y. ♂ ♀ ad. sk.	Vega del Casadero, Vera Cruz, Dec. (*M. T.*).	Salvin-Godman Coll.
z. Ad. sk.	La Antigua, Vera Cruz, Sept. (*M. T.*).	Salvin-Godman Coll.
a', *b'*. ♂ ad. sk.	Hacienda de los Atlixcos, March (*F. D. Godman*).	Salvin-Godman Coll.
c', *d'*. ♀ ad. sk.	Teapa, Tabasco, Feb. (*D. W. Smith*).	Salvin-Godman Coll.
e', f'. Ad. sk.	Northern Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.

g'–k'. ♂ ad. et imm. sk.	Holbox I., Yucatan, Nov. (*G. F. G.*).	Salvin-Godman Coll.
l', *m'*. Ad. sk.	Mugeres I., Yucatan, Dec. (*G. F. G.*).	Salvin-Godman Coll.
n', *o'*. ♀ ad. sk.	Meco I., Yucatan, Nov. (*G. F. G.*).	Salvin-Godman Coll.
p'–t'. Ad. sk.	Cozumel I., Yucatan (*G. F. G.*).	Salvin-Godman Coll.
u'. Ad. sk.	British Honduras.	Leyland Coll. (One of the types of *O. plumbiceps*, Gray.)
v'. Ad. sk.	Vicinity of Belize, Brit. Honduras (*Blancaneaux*).	Salvin-Godman Coll.
w'. Ad. sk.	Guatemala.	Gould Coll. (One of the types of *O. plumbiceps*, Gray.)
x', *y'*. ♀ ad. sk.	Guatemala (*O. S.*).	Salvin-Godman Coll.
z', *a''*. ♂ ad. sk.	Coban, Vera Paz, Guatemala, Nov. (*O. S.*).	Salvin-Godman Coll.
b''. Ad. sk.	Valle Dupar, Santa Marta (*Joad*).	Salvin-Godman Coll. (Type of *O. ruficrissa*, Scl. & Salv.)
c''. Skeleton.		

14. Ortalis leucogastra.

Penelope albiventer, *Less.* (*nec Wagl.*) *Rev. Zool.* 1842, p. 174 [Realejo, Nicaragua]; *Gould*, *Voy. Sulph.*, *Zool.* p. 48, pl. 31 (1844).
Penelope leucogastra, *Gould*, *P. Z. S.* 1843, p. 105.
Ortalida leucogastra, *Gray*, *List of B.* pt. iii. *Gall.* p. 20 (1844); *Sclat. & Salvin*, *Ibis*, 1859, p. 224 [Pacific Coast-region Central America]; *iid. P. Z. S.* 1870, p. 539; *Gray*, *Hand-l. B.* ii. p. 252 (1870).
Penelopsis albiventer, *Bonap. C. R.* xlii. p. 877 (1856).
Chamæpetes leucogastra, *Reichenb. Tauben*, p. 142 (1862).
Ortalida leucogaster, *Gray*, *List Gallinæ Brit. Mus.* p. 13 (1867).

Adult. Closely allied to *O. poliocephala* and *O. vetula*: from the former it is easily distinguished by having less grey on the top of the head and nape, darker upper parts, and whitish under tail-coverts, as well as by its smaller size; from the latter it differs chiefly in the much whiter colour of the belly and under tail-coverts. Total length 20·5 inches, wing 8·3, tail 8·5, tarsus 2·3, middle toe and claw 2·3.

Hab. Central America: Nicaragua, Salvador, and the Pacific slope of Guatemala.

a. Ad. st.	[Mexico.]	Purchased.
b. Ad. sk.	Guatemala.	Verreaux Coll.
c, *d*. Ad. sk.	Retaluleu, Guatemala, Sept. (*O. Salvini*).	Salvin-Godman Coll.
e. Ad. sk.	Costa Grande, Guatemala (*O. S.*).	Salvin-Godman Coll.
f. Ad. sk.	La Libertad, Salvador, Feb. (*W. B. Richardson*).	Salvin-Godman Coll.
g, *h*. ♀ ad. sk.	Momotombo, Nicaragua, May (*W. B. R.*).	Salvin-Godman Coll.

15. Ortalis garrula.

Phasianus garrulus, *Humb. Obs. de Zool.* i. p. 4 (1811) [Magdalena, U.S.C., and Caracas, Venezuela].
Penelope garrula, *Wagl. Isis*, 1830, p. 1111.
Ortalida garrula, *Wagl. Isis*, 1832, p. 1227; *Gray, List of B.* pt. iii. *Gall.* p. 20 (1844); *id. List Gallinæ Brit. Mus.* p. 12 (1867); *id. Hand-l. B.* ii. p. 252 (1870); *Sclat. & Salvin, P. Z. S.* 1870, p. 539.

Adult. This and the two following species belong to a small section of the genus *Ortalis* which is easily distinguished from the species already described by having the primaries chestnut. Top of the head and nape dull brownish rufous; all the rest of the upper parts greyish olive; chest olive-grey, shading gradually into white on the breast and rest of underparts; tail glossed with dull greyish green, all the feathers except the middle pair tipped with white. Total length about 22 inches, wing 8·8, tail 9·6, tarsus 2·8, middle toe and claw 2·7.

Hab. Coast-region of the United States of Colombia, and Caracas, Venezuela.

a.	♀ ad. sk.	U.S. of Colombia?	Purchased.
b, c.	Ad. sk.	Cartagena, U.S. of Colombia (*Barrot*).	Purchased.
d, e.	Ad. sk.	Santa Marta, U.S.C.	Purchased of M. Verreaux.

16. Ortalis cinereiceps.

Ortalida poliocephala, *Lawr.* (*nec Wagl.*) *Ann. Lyc. N. Y.* vii. p. 333 (1862) [U.S. Colombia]; *Sclat. & Salvin, P. Z. S.* 1864, p. 371 [Panama]; *Salvin, P. Z. S.* 1867, p. 161 [Santiago de Veragua; Cordillera de Tole]; *Frantz. J. f. O.* 1869, p. 372 [Costa Rica]; *Lawr. Ann. Lyc. N. Y.* ix. p. 139 (1870) [Costa Rica]; *Gray, Hand-l. B.* ii. p. 252 (1870).
Ortalida cinereiceps, *Gray, List Gallinæ Brit. Mus.* p. 12 (1867) [N.W. coast of America!]; *Salvin, Ibis*, 1869, p. 318 [Panama: Veragua]; *id. P. Z. S.* 1870, p. 217; *Sclat. & Salvin, P. Z. S.* 1870, p. 540; *Gray, Hand-l. B.* ii. p. 252 (1870).
Ortalida frantzii, *Cab. J. f. O.* 1869, p. 211 [Costa Rica]; *Frantz. J. f. O.* 1869, p. 373; *Gray, Hand-l. B.* ii. p. 252 (1870).
Ortalis cinereiceps, *Richmond, P. U.S. Nat. Mus.* xvi. p. 523 (1893) [Escondido R., S. Nicaragua].

Adult male and female. Resemble *O. garrula*, but the head and nape are dark grey instead of rufous-brown.

An *immature* specimen resembles the adult, but the outer primaries of the first plumage are still present and are easily recognized by their more pointed extremities, and by having both webs indistinctly barred with dusky.

Hab. Central America: Costa Rica, Veragua, Panama, and the United States of Colombia.

a.	Ad. sk.	Costa Rica.	Purchased.
b.	♂ ad. sk.	Costa Rica (*J. Carmiol*).	Salvin-Godman Coll.

c. Imm. sk.	San Jose, Costa Rica (*A. von Frantzius*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Veragua (*Arcé*).	Salvin-Godman Coll.
e, f. Ad. et pull. sk.	Cordillera de Tole, Veragua, (*Arcé*).	Salvin-Godman Coll.
g. ♀ ad. sk.	Castillo, Veragua (*Arcé*).	Salvin-Godman Coll.
h. Ad. sk.	Isthmus of Panama.	J. McLeannan, Esq. [C.].
i. Ad. sk.	Panama.	Capt. Kellett & Lieut. Wood [P.]. (Type of the species.)
k. ♂ ad. sk.	Panama (*McLeannan*).	Salvin-Godman Coll.
l. Ad. sk.	Paraiso Station, Panama (*A. Hughes*).	Salvin-Godman Coll.
m. Skeleton.		

17. Ortalis erythroptera.

Ortalida ruficeps, *Sclat.* (*nec Wagl.*) *P. Z. S.* 1860, p. 289 [Babahoyo, Ecuador].

Ortalida erythroptera, *Natterer, Mus. Berol., Licht. Nomencl.* p. 87 (1854) (descr. nulla) [Cumana, Venezuela ?]; *Sclat. & Salvin, P. Z. S.* 1870, p. 540 [Babahoyo; Guayaquil]; *Gray, Hand-l. B.* ii. p. 252 (1870); *Tacz. P. Z. S.* 1877, p. 333 [Palmal, Ecuador]; *Tacz. & Berlepsch, P. Z. S.* 1885, p. 119.

Adult. At once distinguished from *O. garrula* and *O. cinereiceps* by having the extremities of the four outer pairs of tail-feathers widely tipped with dark chestnut. In other respects it resembles the former species, but the top of the head and nape are brighter chestnut, and the same colour surrounds the fore part of the neck, while the tail-coverts are chestnut instead of white or dusky. Iris hazel; bill blue; face bluish; throat reddish; legs and feet blue. Total length 24 inches, wing 9·2, tail 10·6, tarsus 3·1, middle toe and claw 3·1.

Type specimen measures: Total length 21·5 inches, wing 8·2, tail 9·8, tarsus 2·6, middle toe and claw 2·7.

Hab. Western Ecuador: Babahoyo, Guayaquil, and Palmal; ? Cumana, Venezuela.

a. Ad. sk.	Babahoyo, Ecuador (*Fraser*).	Salvin-Godman Coll. (Type of the species.)
b. Ad. sk.	Balzar Mts., Ecuador (*Illingworth*).	Salvin-Godman Coll.

9. PIPILE.

	Type.
Pipile, *Bonap. C. R.* xlii. p. 877 (1856)	P. cumanensis.

Sexes similar in plumage.

Tail composed of 12 feathers, rather long and rounded, the outer pair about an inch and a half shorter than the middle pair.

1st and 2nd primaries with the last third of the inner web

deeply excised; the 1st much shorter than the 2nd, which is about equal in length to the 10th; 6th slightly the longest.

Tarsus rather shorter than the middle toe and claw.

Head with a well-developed crest of pointed feathers; lores and a large patch round the eye naked; front of the neck naked, with only a few hair-like feathers and a median wattle.

Range. South America.

Key to the Species.

A. Upper parts glossed with dark green; both webs of the outer secondary-coverts white ..... *cumanensis*, p. 517.

B. Upper parts glossed with purple.
  a. Outer webs of the outer secondary-coverts white..... *jacutinga*, p. 518.
  b. Outer webs of the outer secondary-coverts dark brown with a white margin ..... *cujubi*, p. 519.

1. Pipile cumanensis.

Crax cumanensis, *Jacquin, Beytr.* p. 25, pl. 10 (1784).
Crax pipile, *Jacquin, Beytr.* p. 26, pl. 11 (1784).
Cumana Curassow, *Lath. Gen. Syn. Suppl.* i. p. 205 (1787).
Penelope leucolophos, *Merrem, Av. Icones et Descr.* ii. pp. 43, 44, pl. 12 (1786); *id. Beytr. Vög.* ii. pp. 46, 47, pl. 12 (1786) [Oyapok, Guiana; Orinoco]; *Bonn. Tabl. Encycl. Méth.* i. p. 171, pl. 84. fig. 3 (1791).
Penelope cumanensis, *Gm. S. N.* i. pt. ii, p. 734 (1788); *Lath. Ind. Orn.* ii. p. 620 (1790); *Wagl. Isis*, 1830, p. 1109; *v. Pelz. SB. Ak. Wien*, xxxi. p. 330 (1858); *Léotaud, Ois. de Trin.* p. 383 (1866) [Trinidad]; *Gray, Hand-l. B.* ii. p. 251 (1870).
Penelope pipile, *Gm. S. N.* i. pt. ii. p. 734 (1788); *Bonn. Tabl. Encycl. Méth.* i. p. 172, pl. 86. tig. 3 (1791); *Temm. Pig. et Gall.* iii. pp. 76, 694 (1815); *Gray, List of B.* pt. iii. *Gall.* p. 19 (1844); *J. E. Gray, Knowsl. Menag.* ii. pl. 10 (1846); *Cab. in Schomb. Brit. Guiana*, iii. p. 745 (1848); *Sclat. P. Z. S.* 1855, p. 163, 1858, p. 76 [Rio Napo, Ecuador]; *Brown, Brit. Guiana*, p. 345 (1877).
Crax cunamensis, *Bonn. Tabl. Encycl. Méth.* i. p. 174, pl. 86. fig. 2 (1791).
Pipile cumanensis, *Bonap. C. R.* xlii. p. 877 (1856); *Reichenb. Tauben*, p. 154 (1862); *Sclat. & Salvin, P. Z. S.* 1870, p. 529 [Venezuela; Bogota; E. Peru; Bolivia].
Pipile leucolophos, *Bonap. C. R.* xlii. p. 877 (1856) [part.].
Pipile nattereri, *Reichenb. Tauben*, p. 154 (1862).
Penelope jacquinii, *Gray, List Gallinæ Brit. Mus.* p. 8 (1867) [Peru]; *id. Hand-l. B.* ii. p. 251 (1870).
Penelope nattereri, *v. Pelz. Orn. Bras.* p. 283 (1870) [Upper Amazons; Rio Negro]; *Gray, Hand-l. B.* ii. p. 251 (1870).
Penelope grayi, *v. Pelz. Orn. Bras.* p. 284 (1870) [Sangrador, Matto Grosso]; *Gray, Hand-l. B.* ii. p. 251 (1870).

Adult male and female. General colour above black glossed with dark green; top of the head covered with elongate white feathers

forming a crest,* and extending halfway down each side of the neck; some of the feathers of the mantle, inner wing-coverts, and chest margined with white on the sides; the first six or seven outer secondary-coverts and some of the outer median coverts white except their tips, which are black glossed with green. Point of bill black; cere and naked skin round the nostrils and eye white, streaked with blue; naked skin on throat and wattle dark blue; eye dark red-hazel; legs and feet Indian red, claws brownish black.

Male. Total length 30 inches, wing 13·2, tail 11·5, tarsus 2·5, middle toe and claw 2·7.

Female. Total length 28 inches, wing 12·6, tail 10·7, tarsus 2·5, middle toe and claw 2·6.

Hab. British Guiana, Venezuela, Trinidad, Rio Negro, Upper Amazons, United States of Colombia, Rio Napo, Ecuador, E. Peru, Bolivia, Matto Grosso.

a. Ad. sk.	British Guiana.	Royal Geographical Society [P.].
b, *c*. ♂ ♀ ad. sk.	Takutu River, British Guiana, Feb., Mar. (*H. Whitely*).	Salvin-Godman Coll.
d. Ad. sk.	U.S. Colombia.	Verreaux Coll.
e. Ad. sk.	U.S. Colombia (*Trübner*).	Salvin-Godman Coll.
f. Ad. sk.	Vicinity of Bogota, U.S.C.	Salvin-Godman Coll.
g, *h*. Ad. sk.	Sarayacu, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
i. Ad. sk.	Peru.	Gould Coll. (Type of *P. jacquinii*, Gray.)
k. Ad. sk.	Cosnipata, Peru, May (*H. Whitely*).	Salvin-Godman Coll.
l–n. Skeletons.		
o. ♂ skeleton.	Rio Negro.	Salvin-Godman Coll.

2. Pipile jacutinga.

El Yacú-apéti, *Azara*, *Apunt.* iii. p. 80, no. 337 (1802).
Penelope pipile, var. A, *Temm. Pig. et Gall.* iii. pp. 76, 695 (1815).
Penelope jacutinga, *Spix*, *Av. Bras.* ii. p. 53, pl. 70 (1825) [Bahia; Rio de Janeiro]; *Gray*, *List Gallinæ Brit. Mus.* p. 8 (1867); *id. Hand-l. B.* ii. p. 251 (1870); *v. Pelz. Orn. Bras.* p. 283 (1870) [São Paulo].
Penelope pipile, *Wagl. Isis*, 1830, p. 1109; *Burmeister*, *Syst. Uebers.* iii. p. 336 (1856) [Paraguay]; *v. Pelz. SB. Ak. Wien*, xxxi. p. 329 (1858) [São Paulo].
Penelope nigrifrons, *Temm. MS.*, *Less. Traité d'Orn.* p. 482 (1831).
Penelope leucoptera, *Max. Beitr. Nat. Bras.* iv. p. 544 (1832).
Pipile nigrifrons, *Bonap. C. R.* xlii. p. 877 (1856).

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* In some specimens, probably younger examples, the shafts of the feathers are dark. This is one of the characters used by Gray in distinguishing the Peruvian bird (which he calls *P. jacquinii*, Reichenb.) from *P. cumanensis* from British Guiana. But two examples obtained by Whitely on the Takutu River, Guiana, have a number of the crest-feathers with dark shafts, while, on the other hand, an example obtained by the same collector at Cosnipata, Eastern Peru, has all the shafts white, so there can be little doubt the dark shafts are a character which disappears with age.

Pipile leucolophos, *Bonap. C. R.* xlii. p. 877 (1856) [part.]; *Reichenb. Tauben*, p. 152 (1862).
Pipile jacutinga, *Sclat. & Salvin, P. Z. S.* 1870, p. 530; *Berlepsch & Ihering, Zeit. Ges. Orn.* 1885, p. 178 [Tacquary, R. Grande do Sul]; *Meyer, Vogel-Skel.* pt. xiv. pl. cxxxvii. (1890).

Adult male and female. Differ from *P. cumanensis* chiefly in having a much smaller naked space round the eye, the chin and upper part of the throat covered with black feathers; the general colour above brownish black glossed with purple; the forehead and superciliary stripes black; the elongate white feathers of the top of the head and nape with black shaft-stripes; only the *outer webs* of the outer secondary-coverts white, and the white margins to the feathers of the chest and breast much more strongly marked. Iris reddish carmine; cere and naked skin round the eye bluish white; base of the bill, chin, and upper part of the throat blackish blue; wattle and fore part of neck crimson-red; legs and feet carmine-red. Total length 30 inches, wing 13, tail 11·5, tarsus 2·5, middle toe and claw 2·7.

Hab. S.E. Brazil: Bahia, São Paulo, Rio, Parana, Rio Grande do Sul, and Paraguay.

a, b. Ad. sk.	Brazil.	Purchased of M. Verreaux
c. ♀ ad. sk.	S.E. Brazil, Aug.	Salvin-Godman Coll.
d. Ad. sk.	São Paulo (*Natterer*).	Salvin-Godman Coll.
e. Ad. sk.	Rio Parana (*Rodgers*).	Salvin-Godman Coll.

3. Pipile cujubi.

Yacon Turkey, *Lath. Gen. Syn.* ii. pt. ii. p. 681, pl. lxi. (1783).
Penelope cujubi, *Natterer MS., v. Pelz. SB. Ak. Wien*, xxxi. p. 328 (1858) [Para]; *id. Orn. Bras.* p. 284 (1870); *Gray, Hand-l. B.* ii. p. 251 (1870).
Pipile cujubi, *Reichenb. Tauben*, p. 153 (1862); *Sclat. & Salvin, P. Z. S.* 1870, p. 530.

Adult male and female. Resemble *P. jacutinga* in having the general colour brownish black glossed with purple, but may be at once distinguished by having the feathers of the crest dark brown edged with white, the chin and throat almost naked as in *P. cumanensis*; the outer secondary-coverts margined with white on the outer web, the outer median and lesser coverts and a few of the breast-feathers margined with white on both webs. Naked skin round the eye, base of the bill, chin and throat dark blue; fore part of the neck and wattle red; legs and feet Indian red (in skin).

Male. Total length 30 inches, wing 13·5, tail 11·5, tarsus 2·55, middle toe and claw 2·7.

Female. Total length 27·7 inches, wing 12·7, tail 11, tarsus 2·4, middle toe and claw 2·5.

Hab. Lower Amazons, Para.

a–c. Ad. sk.	Lower Amazons, May, June, Oct.	Salvin-Godman Coll.
d. Ad. st.	[Lower Amazons.]	Zool. Soc. Coll.

10. ABURRIA.

Type.

Aburria, *Reichenb. Nat. Syst. Vögel*, p. xxvi (1852) ..... A. aburri.
Opetioptila, *Sundev. Tentamen*, p. 118 (1872) ..... A. aburri.

Tail composed of 12 feathers.

First three primaries are deeply excised at the extremity and the 4th less so.

1st primary much shorter than the 2nd; 4th equal to the 10th, and the 6th slightly the longest.

Fore part of the neck partially naked, with an elongate vermiform wattle; only a small naked space below the eye.

Tarsus longer than the middle toe and claw.

Range. Interior of the United States of Colombia, and Ecuador.

1. Aburria aburri.

Penelope aburri, *Less. Dict. Sci. Nat.* lix. p. 191 (1829) [Vicinity of Bogota, Valley of Cauca, and Mts. of Quindiù]; *id. Traité d'Orn.* p. 482 (1831); *Gray, List of B.* pt. iii, *Gall.* p. 19 (1844); *id. List Gallinæ Brit. Mus.* p. 9 (1867); *id. Hand-l. B.* ii. p. 251 (1870).

Aburria carunculata, *Reichenb. Syst. Av.* p. xxvi (1852); *id. Tauben*, p. 141 (1862); *Bonap. C. R.* xlii. p. 877 (1856); *Sclat. P. Z. S.* 1857, p. 19 [Bogota], 1858, p. 76 [Rio Napo]; *Sclat. & Salvin, P. Z. S.* 1870, p. 531 [Interior U.S. Colombia].

Penelope carunculata, *Temm. MS., Sclat. & Salvin, P. Z. S.* 1870, p. 531.

Adult. Whole of the plumage black glossed with dark green; fore part of the upper half of the neck mostly naked or thinly covered with feathers, and with a naked elongate vermiform wattle situated at the base. Total length 29 inches, wing 14 to 14·5, tail 12, tarsus 2·7, middle toe and claw 2·9.

Young birds resemble the adult, but the plumage is browner and less glossy; the naked skin on the throat and elongate wattle well developed.

In the *youngest example* the outer secondaries (which are feathers of the first plumage) are brown, slightly glossed and mottled with pale rufous towards the extremity; and the outer primaries are much less excised at the extremity.

Hab. Same as that of the genus.

a, b. Ad. sk. et st.	U.S. of Colombia.	Purchased.
c. ♂ ad. sk.	U.S. of Colombia.	Salvin-Godman Coll.
d. Imm. sk.	Interior of U.S. of Colombia (*Trübner*).	Salvin-Godman Coll.
e. Ad. sk.	Antioquia, U.S.C. (*T. K. Salmon*).	Salvin-Godman Coll.
f. Juv. sk.	Santa Fé de Bogota.	Salvin-Godman Coll.
g, h. Ad. sk.	Chiguinda, Ecuador (*Villagomez*).	Salvin-Godman Coll.

11. CHAMÆPETES.

Type.
Chamæpetes, *Wagler, Isis*, 1832, p. 1227 ..... C. goudoti.

Tail composed of 12 feathers, long and rounded, the outer pair being a good deal shorter than the middle pair.

The two outer primaries deeply excised at the extremity, and the third less so.

1st primary much shorter than the 2nd ; 4th about equal to the 10th ; and the 6th or 7th slightly the longest.

Chin and throat covered with feathers.

A naked space round and in front of the eye.

No marked crest, but the feathers of the top of the head are rather long.

Middle toe and claw slightly longer than the tarsus.

Range. Costa Rica to Peru.

Key to the Species.

A. Underparts rufous ..... *goudoti*, p. 521.
B. Underparts black glossed with dull green .... *unicolor*, p. 522.

1. Chamæpetes goudoti.

Ortalida goudotii, *Less. Man. d'Orn.* ii. p. 217 (1828); *id. Dict. Sci. Nat.* lix. p. 195 (1829); *id. Traité d'Orn.* p. 481 (1831) [Quindiù Mts., U.S.C.]; *Gray, List Gallinæ Brit. Mus.* p. 13 (1867); *id. Hand-l. B.* ii. p. 253 (1870).

Chamæpetes goudotii, *Wagl. Isis*, 1832, p. 1227; *Reichenb. Tauben*, p. 142 (1862); *Sclat. & Salvin, P. Z. S.* 1870, p. 531; *Berlepsch & Tacz. P. Z. S.* 1884, p. 312 [W. Ecuador]; *Salvin, Ibis*, 1884, p. 318.

Penelope rufiventris. *Tschudi, Wiegm. Arch.* 1843, p. 386 [Peruvian Andes, up to 7200 ft.]; *id. Faun. Per., Aves*, p. 291, pl. xxxi. (1845-6); *Tacz. P. Z. S.* 1882, p. 48 [N.E. Peru].

Ortalida rufiventris, *Sclat. P. Z. S.* 1859, p. 147 [Pallatanga, Ecuador]; *Gray, Hand-l. B.* ii. p. 252 (1870).

Chamæpetes tschudii, *Tacz. Orn. Pérou*, iii. p. 275 (1886) [Moyobamba, N.E. Peru].

Adult male and female. General colour above brownish glossed with bronze-green ; feathers of the top of the head and neck more or less distinctly washed and margined with grey ; lower chest cinnamon, shading into rufous on the breast and into chestnut on the flanks, thighs, and under tail-coverts. Total length 24 inches, wing 10·2, tail 10, tarsus 2·6, middle toe and claw 2·7.

Specimens vary somewhat *inter se*, some having the underparts a good deal paler than others. I am inclined to think that these differences may be due to age—they are apparently not due to sex.

Hab. Interior of the United States of Colombia, Ecuador and Peru.

a. b. Ad. st.	U.S. of Colombia.	Purchased.
c, d. Ad. et vix ad. sk.	Interior of U.S. Colombia	Salvin-Godman Coll.
e. Ad. sk.	Vicinity of Bogota, U.S.C.	Salvin-Godman Coll.
f, g. ♀ ad. sk.	Province of Antioquia. U.S.C. (*T. K. Salmon*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Retiro (7000 ft.), Province of Antioquia (*T. K. S.*).	Salvin-Godman Coll.
i. ? Juv. sk.	Ecuador.	Salvin-Godman Coll.
k. Ad. sk.	Vicinity of Quito, Ecuador.	Salvin-Godman Coll.
l. Ad. sk.	Pallatanga, Ecuador (*Fraser*).	Eyton Coll.
m–o. Ad. sk.	Chiguinda, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
p. ♀ ad. sk.	Central Peru, March (*Jelski*).	Warsaw Mus. [E.].

2. Chamæpetes unicolor.

Chamæpetes unicolor, *Salvin, P. Z. S.* 1867, pp. 159, 160 [Veragua]; *Sclat. & Salvin, P. Z. S.* 1870, p. 531; *Lawr. Ann. Lyc. N. Y.* ix. p. 139 (1870) [La Palma and Rancho Redondo, Costa Rica].
Ortalida unicolor, *Gray, Hand-l. B.* ii. p. 253 (1870).

Adult male and female. General colour above black glossed with dark green; belly browner, and in most specimens the feathers are indistinctly mottled round the edges with pale rufous buff; but in the two specimens marked as males one has no trace of these edgings and the other only the faintest trace, so the difference may be sexual or more likely still due to age. Total length 25 inches, wing 11 to 11·7, tail 10·5, tarsus 2·7, middle toe and claw 2·85.

Hab. Central America: Costa Rica and Veragua.

a. Ad. sk.	San José, Costa Rica (*Dr. A. von Frantzius*).	Salvin-Godman Coll.
b. Ad. sk.	Irazu, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
c, d. ♂ ad. et vix sk.	Calovevora, Veragua (*Arcé*).	Salvin-Godman Coll. (Type of the species.)
e. ♂ ad. sk.	Cordillera de Tole, Veragua (*Arcé*).	Salvin-Godman Coll.

Order VIII. OPISTHOCOMI.

Palate schizognathous; nasals holorhinal; no basypterygoid process; antepenultimate dorsal vertebræ free, the inferior faces of the centra of the dorsal vertebræ are flattened and without crests; the sternum is unique—the lateral edges are nearly parallel for two thirds of its length, then diverge so that it is wider posteriorly than anteriorly; the posterior margin with two small notches on each side, the outer being reduced to a foramen; keel very small and cut away in front with a flattened-out and broadened surface at the posterior termination of the *carina sterni*. On this surface the greater part of the weight of the body is supported when the bird is at rest. The coracoids, clavicles, and furcula (which are short) are completely anchylosed to each other and to the sternum.

The enormous crop distorts the furcula and sternum and occupies the upper part of the chest, being placed in a deep cavity in the upper half of the pectoral muscles.

Hallux very long.

No bastard secondary.

Oil-gland tufted.

No lateral bare tracts on the neck; the inferior feathered tracts beginning at the bottom of the neck run in two parallel bands which taper gradually towards the vent; dorsal tract bifurcates between the shoulders.

The young are hatched naked, and the pollex and index digit are provided with a claw which enables them to climb soon after they are hatched, the bill as well as the legs and wings being used for holding on to the twigs; they are also able to swim and dive with facility when compelled to do so.

Eggs two or three in number, double-spotted and Rail-like.

Nest composed of sticks and placed on the tops of bushes near the water's edge.

Family I. OPISTHOCOMIDÆ.

1. OPISTHOCOMUS.

	Type.
Opisthocomus, *Illiger*, *Prodr. Syst. Mamm. et Av.* p. 239 (1811); *Flem. Phil. Zool.* ii. p. 232 (1822)	O. hoazin.
Orthocorys, *Vieill. Analyse*, p. 49 (1816)	O. hoazin.
Sasa, *Vieill. Nouv. Dict. d'Hist. Nat.* xxx. p. 216 (1819).	O. hoazin.

Tail elongate and rounded, composed of 10 feathers, the middle pair being considerably longer than the outer pair.

1st primary much shorter than the 2nd, which is shorter than the 10th; 6th–8th subequal and longest. Fifth cubital remex present.

Tarsus reticulated, shorter than the middle toe and claw.

An elongate crest of rather stiff-shafted feathers.

Sides of the head mostly naked.

Sexes similar.

Range. S. America: Surinam to the United States of Colombia and southwards to Bolivia.

1. Opisthocomus hoazin.

Crax fuscus mexicanus, *Briss. Orn.* i. p. 304 (1760).
Faison huppe de Cayenne, *d'Aubent. Pl. Enl.* ii. pl. 38 [no. 337].
L'Hoazin, *Buff. Hist. Nat. Ois.* ii. p. 385 (1771).
Phasianus hoazin, *Müll. S. N. Suppl.* p. 125 (1776).
Crested Pheasant, *Lath. Gen. Syn.* ii. pt. ii. p. 720, pl. lxiv. (1783).
Phasianus cristatus, *Gm. S. N.* i. pt. ii. p. 741 (1788); *Lath. Ind. Orn.* ii. p. 631 (1790).
Orthocorys cristata, *Vieill. Analyse*, p. 49 (1816).
Opisthocomus hoatzin, *Steph. in Shaw's Gen. Zool.* xi. p. 193 (1819); *Gray, Hand-l. B.* ii. p. 126 (1870).
Sasa cristata, *Vieill. Nouv. Dict. d'Hist. Nat.* xxx. p. 216 (1819); *id. Gal. Ois.* i. pt. ii. p. 325, pl. 193 (1825).
Opisthocomus cristatus, *L'Herminier, C. R.* v. p. 433 (1837); *Gray, Gen. B.* ii. p. 396, pl. xcvii. fig. 4, pl. xcviii. (1845); *Schomburgk, Reise Brit. Guiana*, iii. p. 712 (1848); *Burmeister, Syst. Uebers.* iii. p. 342 (1856); *Sclat. P. Z. S.* 1857, p. 19 [Bogota]; *Huxley, P. Z. S.* 1867, pp. 435, 460, 1868, p. 304 [skeleton]; *Newton, Ibis*, 1869, p. 217; *Cabanis, J. f. O.* 1870, p. 318, pl. i. fig. 3 [egg]; *Sclat. & Salvin, P. Z. S.* 1873, p. 368 [Cashiboya, E. Peru]; *Perrin, P. Z. S.* 1873, p. 685 [Maroni R., Surinam]; *id. Trans. Z. S.* ix. p. 353, pls. 63–66 (1875); *Brown, Canoe and Camp-life Brit. Guiana*, p. 257 (1876); *Sachs, Schild. Reise nach Venezuela*, p. 259 (1878) [Confluents of the Orinoco]; *Garrod, P. Z. S.* 1879, p. 109 [anatomy]; *Forbes, Ibis*, 1881, p. 25; *Sclat. P. Z. S.* 1881, p. 259 [eggs from Obidos, Amazons]; *Nathusius, J. f. O.* 1881, p. 334, 1882, p. 275; *Berlepsch, Ibis*, 1884, p. 440 [Angostura, Venezuela, and Yquitos]; *Brigham, Chicago Ac. Sci.* p. — (1884) [Marajo I., Anabiju R.]; *id. Ibis*, 1885, p. 118; *Tacz. Orn. Pérou*, iii. p. 262 (1886) [Cashiboya]; *Harting, Ibis*, 1886, p. 98; *W. L. Sclater, Ibis*, 1887, p. 319 [Berbice R., Brit. Guiana]; *Quelch, Ibis*, 1888, p. 378 [Berbice R., Brit. Guiana]; *id. Timehri*, ii. p. 363 (1888) [Abary Creek]; *Young, Notes Leyd. Mus.* x. p. 169, pl. 8 (1888); *Beddard, Ibis*, 1889, pp. 283–293 [anatomy]; *Newton, Ibis*, 1889, p. 577; *Allen, Bull. Am. Mus. N. H.* ii. p. 107 (1889) [Lower Beni, Bolivia]; *Sclat. P. Z. S.* 1889, p. 57; *Quelch, Ibis*, 1890, p. 327 [Abary Creek and Berbice R., Brit. Guiana, habits]; *Parker, P. Z. S.* 1890, p. 44; *id. Trans. Zool. Soc.* xiii. pp. 43–86, pls. vii.–x. (1891); *Gadow, P. R. Irish Ac.* (3) ii. p. 147, pls. vii. & viii. (1892).

Adult male and female. General colour of the upper parts dark brown glossed with olive; top of the head covered with long, narrow,

pointed feathers with rather stiff shafts, those covering the fore part of the head being reddish brown, while the occipital feathers are mostly dark brown; feathers on the nape and back of the neck dark brown with lanceolate buff centres, those of the upper mantle similar but with white shaft-stripes; scapulars margined on the sides with white; feathers round the bend of the wing, and the outer webs of the bastard-wing and outer primary-coverts mostly pale buff; rest of the wing-coverts tipped with white; quills chestnut-brown glossed with dull olive at the extremity; first secondary chestnut down the middle, remainder dark brown glossed with olive; chin, throat, chest, and breast pale buff, shading into chestnut on the sides and rest of underparts; under wing-coverts chestnut; tail dark brown glossed with olive and widely tipped with whitish buff. Total length 23 inches, wing 12·4–12·6, tail 11·4–12·4, tarsus 1·9–2·2, middle toe and claw 1·9.

Hab. Same as that of the genus.

a, *b*. ♀ ad. sk.	Para, Lower Amazons, June (*A. R. Wallace*).	Salvin-Godman Coll.
c. Ad. sk.	Cayenne.	Riocour Coll.
d, *e*. Ad. sk.	British Guiana.	Sir R. Schomburgk [P.].
f, *g*. ♂ ♀ ad. st.	Berbice R., British Guiana.	J. J. Quelch, Esq. [P.].
h. Ad. sk.	Vicinity of Bogota, U. S. Colombia.	Salvin-Godman Coll.
i, *k*. ♂ ♀ ad. sk.	Yquitos, Upper Amazons, Aug. (*H. Whitely*).	Salvin-Godman Coll.
l, *m*. Ad. sk.	Rio Copataza, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
n. Skeleton.	British Guiana.	J. J. Quelch, Esq. [P.].
o. Skeleton.	No locality.	Salvin-Godman Coll.

Order IX. HEMIPODII.

Maxillo-palatines not coalesced with one another or with the vomer; nasals schizorhinal; dorsal vertebræ heterocœlous; sternum with a deep notch on each side of the posterior margin, about two-thirds of the length of the entire sternum; episternum well-developed, incompletely perforated to receive the bases of the coracoids, which are separated by a thin bony septum.

Bill like that of the Gallinæ, but often not so strongly developed.

Feet generally with three toes only, the hallux being absent except in *Pedionomus*.

Oil-gland tufted.

The spinal feather-tract does not reach the neck, but the three others do.

No bastard secondary. Fifth cubital remex present.

Young born covered with down and able to run soon after they are hatched.

Eggs double-spotted and three to five in number.

Nest none.

The female is always larger and the plumage almost always more handsome than that of the male, and the latter in the majority of species, if not in all, incubates the eggs and tends the young.

Family I. TURNICIDÆ.

Key to the Genera.

A. Hind toe absent	Turnix, p. 526.
B. Hind toe present	Pedionomus, p. 554.

1. TURNIX *.

	Type.
Turnix, *Bonnat. Tabl. Encycl. Méth.* i. pp. lxxxii, 5 (1790)	T. sylvatica.
Tridactylus, *Lacép. Mém. Instit.* p. 512 (1800–1)	T. sylvatica.
Ortygis, *Illiger, Prodr. Syst. Mamm. et Av.* p. 242 (1811)	T. sylvatica.
Hemipodius, *Temm. Man. d'Orn.* p. 313 (1815); *id. Pig. et Gall.* iii. p. 610 (1815)	T. nigricollis.

* Doubtful species:—

1. Turnix, sp.

Hemipodius thoracicus, *Rosenb.* (*nec Temm.*) *Nat. Tijd. Ned. Ind.* xxv. p. 253 (1863); *id. J. f. O.* 1864, p. 135 [part., Waigiou].

Turnix ocellata, *Salvad. Orn. Pap.* iii. p. 299 (1882).

	Type.
Ortygodes, *Vieill. Analyse*, p. 52 (1816)	T. ocellata.
Areoturnix, *Bonap. C. R.* xliii. p. 414 (1856).....	T. taigoor.
Areortyx, *Heine, Nomencl. Mus. Hein.* p. 290 (1887)	T. taigoor.

Hallux absent.

Range. Indo-Malayan region,' extending to New Britain, New Caledonia, and Australia, also Arabia, S. Europe, Africa, and Madagascar.

Key to the Species.

I. Tarsus longer than middle toe and claw; bill slender or only moderately strong.
  A. Entire breast transversely barred with black; belly immaculate. Sexes different.
    a'. Chin and throat (and in very old birds the middle of the chest) black.
      a''. No rufous nuchal collar differentiated from the back ..... *taigoor* ♀ ad., p. 530.
      b''. A fairly defined rufous nuchal collar ..... *pugnax* ♀ ad., p. 534.
      c''. A well-defined rufous nuchal collar ..... *fasciata* ♀ ad., p. 535.
    b'. Chin and throat barred with black like the breast.
      d''. Sides of abdomen, thighs, and under tail-coverts rufous..... *rufilatus* ♀ ad., p. 536.
      e''. Under surface without rufous.. *powelli* ♀ ad., p. 537.
    c'. Chin and throat white, sides only with narrow black edgings to the feathers.
      f''. Chest barred with black and *white*.
        a'''. Sides of abdomen, thighs, and under tail-coverts rufous.... *rufilatus* ♂ ad., p. 536.
        b'''. Under surface without rufous *powelli* ♂ ad., p. 537.
      g''. Chest barred with black and *buff*.
        c'''. No rufous nuchal collar differentiated from back.
          a^1. Abdomen and thighs rufous; back rufous or brown .... { *taigoor* ♂ ad., ♀ imm., p. 530. / *pugnax* ♂ ad., ♀ imm., p. 534.
          b^1. Abdomen whitish; thighs rufous; back blackish grey *fasciata* ♂ ad., p. 535.
        d'''. A rufous nuchal collar..... *fasciata* ♂ ♀ imm., p. 535.
  B. Centre of breast not transversely barred with black; throat never black. Sexes similar in one group, but slightly different in the other section.
    d'. Middle feathers of the tail elongated and pointed and edged with white or buff; feathers of the upper surface edged with white or buff, giving the back a scaly appearance. Sexes similar.

h''. Centre of breast and belly immaculate; sides of breast spotted with black or barred with black and white.

e'''. Scapulars margined with white or whitish grey. Feathers on sides of breast pale buff, contrasting strongly with the rust-red centre of the breast, each with a heart-shaped subterminal black spot.

*c*⁴. Larger; wing ca. 3·7 in female ..... *sylvatica* ♂ ♀ ad., p. 537.

*d*⁴. Smaller; wing ca. 3·3 in female ..... *lepurana* ♂ ♀ ad., p. 539.

f'''. Scapulars margined with golden buff or straw-colour.

*e*⁴. Feathers on the sides of the breast buff, contrasting but slightly with the brighter buff centre of the breast; each with a subterminal black or black and rufous spot. Wing ca. 2·9 in female ..... *dussumieri* ♂ ♀ ad., p. 540.

*f*⁴. Feathers on the sides of the breast with the ends barred transversely with black and white ..... *nana* ♂ ♀ ad., p. 541.

i''. Centre of breast and belly with round subterminal spots on most of the feathers; sides of breast with terminal black and white transverse bars (as in *T. nana*). *hottentotta* ♂ ♀ ad., p. 542.

e'. Middle tail-feathers not elongated and pointed, nor edged with white or buff; feathers of upper surface without any scaly appearance. Sexes different.

k''. A well-defined rufous nuchal collar.

g'''. Scapulars not edged with golden buff.

*g*⁴. Back uniform greyish brown, with fine faint wavy transverse bars of darker brown. Wing ca. 3·5..... *tanki* ♀ ad., p. 544.

*h*⁴. Back brownish grey, irregularly blotched and vermiculated with black and sometimes with traces of rufous; nuchal collar bright rufous, narrower. Wing ca. 3·9 ..... *blanfordi* ♀ ad., p. 542.

*i*⁴. Back dark brownish grey, irregularly blotched and

vermiculated with black and rufous; nuchal collar dark rufous, wider. Wing ca. 3·2 ..... *albiventris* ♀ ad., p. 545.

h'''. Scapulars edged with golden buff*.

k[4]. Throat and breast pale rufous; belly whitish buff. Bill slender ..... *maculosa* ♀ ad., p. 546.

l''. No rufous collar, and no rufous in feathers of upper surface, or with traces only of this colour.

i'''. Scapulars not edged with golden buff.

l[4]. Back uniform greyish brown, with fine wavy transverse bars of darker colour .... *tanki* ♂ ad., p. 544.

m[4]. Back brownish grey, irregularly blotched and vermiculated with black .... *blanfordi* ♂ ad., p. 542.

n[4]. Back dark brownish grey, irregularly blotched and vermiculated with black and rufous ..... *albiventris* ♂ ad., p. 545.

k'''. Scapulars edged with golden buff.

o[4]. Chest rufous; upper surface greyish black.

a[5]. Throat buff..... *saturata* ♀ ad., p. 547.

b[5]. Throat white ..... *saturata* ♂ ad., p. 547.

p[4]. Chest buff; upper surface greyish brown ..... *maculosa* ♂ ad., p. 546.

q[4]. Chest rufous; upper surface greyish brown ..... *rufescens*? ♂ ad., p. 547.

m''. No defined rufous nuchal collar, but most of the feathers of the upper surface (especially those of the nuchal region) with a patch at the extremity rufous or rufous intermixed with black.

l'''. Scapulars not edged with golden buff ..... } *blanfordi*, *tanki*, and *albiventris*, ♂ ♀ imm., pp. 542, 544, 545.

m'''. Scapulars edged with golden buff ..... } *saturata* and *maculosa*, ♂ ♀ imm., pp. 546, 547.

C. Neck and breast uniform bright rufous; upper tail-coverts very long, entirely covering the true tail.

f'. Chin, throat, and cheeks black and white (almost black in very old birds)..... *ocellata* ♀ ad., p. 548.

g'. Chin and throat white spotted with black ..... *ocellata* ♂ ad., p. 548.

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* The female of *T. rufescens*, Wallace, which is at present unknown, must evidently be closely allied to *T. maculosa*, judging from the type (?♂ ad.).

II. Tarsus equal to or shorter than the middle toe and claw; bill slender or very stout.

D. Breast and belly uniform dove-grey; shoulders and sides of chest very bright rufous; chin and throat deep black edged with white. Bill slender. *nigricollis* ♀ ad., p. 549.

E. Chest black, many of the feathers having terminal bars of white; upper surface umber, with here and there irregular marks of black, rufous, and white. Bill fairly strong ..... *melanogaster* ♀ ad., p. 550.

F. Chest whitish, with a wide V-shaped subterminal black mark across each feather; upper surface as in ♀ ad. Bill not so strong..... *melanogaster* ♂ ad., p. 550.

G. Chest buff, irregularly spotted and marked with grey; no rufous nuchal collar, but otherwise the upper surface similar to that of the ♀ ad. Bill slender ..... *varia* ♂ ad., p. 551.

H. Chest grey; each feather with a pale buff or whitish shaft-streak, becoming more or less spatulate towards the margin. Feathers surrounding the eye black spotted with white.

h'. Bill moderately stout; a fairly defined bright rufous nuchal collar; back black, each feather irregularly and narrowly barred with rufous ..... *varia* ♀ ad., p. 551.

i'. Bill very stout; upper surface uniform dull light red, one or two of the feathers of the middle of the back mixed with black ..... *castanonota* ♂ ♀ ad., p. 552.

I. Chest rufous. Feathers round the eye black spotted with white. Upper surface stone-grey, most of the feathers of the back with narrow transverse bars of rufous and black .... *pyrrhothorax* ♂ ♀ ad., p. 553.

K. Chest dull light red, darker at the sides than in the middle. Feathers surrounding the eye dull light red, like the rest of the upper surface. Bill very stout..... *velox* ♂ ♀ ad., p. 553.

1. Turnix taigoor.

Hemipodius taigoor, *Sykes, P. Z. S.* 1832, p. 155 [Deccan]; *Bengal Sport. Mag.*, Oct. 1836, p. 171, pl. i. fig. 8 (♀ ad.); *Sykes, Trans. Zool. Soc.* ii. p. 23, pl. iv. (1841).

Ortygis nigricollis, *Jard.* (*nec Gm.*) *Nat. Lib., Orn.* iv. p. 191, pl. xxviii. (1834).

Hemipodius plumbipes, *Hodgs. Icon. ined. in Brit. Mus.* nos. 126, 127; *id. Bengal Sport. Mag.* May 1837, p. 346.

Hemipodius atrogularis, *Eyton, P. Z. S.* 1839, p. 107 [Malacca].

Hemipodius taigur? v. plumbipes, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844) [Nepal].

Turnix ocellatus, *Blyth* (*nec Scop.*), *Cat. B. Mus. As. Soc.* p. 25 (1849); *Swinhoe, Ibis*, 1863, p. 398 [Formosa]; *Jerd. B. India*, ii. p. 597 (1864).

Turnix ocellatus, var. taigoor, *Layard, Ann. Mag. N. H.* (2) xiv. p. 107 (1854).

Turnix taigoor, *Jerd. B. India*, ii. p. 595 (1864); *Beavan, Ibis*, 1868, p. 386 [Maunbhoom Dist.]; *Gray, Hand-l. B.* ii. p. 271, no. 9751 (1870); *Holdsw. P. Z. S.* 1872, p. 470 [part.]; *Ball, Str. F.* ii. p. 428 (1874) [Chota Nagpur]; *Butler, Str. F.* iv. p. 7 (1876), v. p. 231 (1877) [N. Guzerat; Cutch]; *Ball, Str. F.* vii. p. 226 (1878) [Ganges to Godaveri]; *Davidson & Wenden, Str. F.* vii. p. 87 (1878) Deccan; *Hume & Marshall, Game B.* ii. p. 169, pl. (1879); *Butl. Cat. B. Sind*, p. 55 (1879); *Legge, B. Ceylon*, iii. p. 761 (1880) [part., N. Ceylon]; *Vidal, Str. F.* ix. p. 77 (1880) [S. Konkan]; *Butl. Cat. B. S. Bombay*, p. 70 (1880); *Davidson, Str. F.* x. p. 317 (1882) [W. Khandeish]; *Davison, Str. F.* x. p. 412 (1883) [Mysore]; *Swinhoe & Barnes, Ibis*, 1885, p. 132 [Central India]; *Macgregor, Str. F.* x. p. 441 (1887) [Deccan and S. Mahratta Country]; *Taylor, Str. F.* x. p. 465 (1887) [Manzeerabad, Mysore]; *Macpherson, Str. F.* x. p. 519 (1887) [Chanda, C. P.]; *Grant, Ibis*, 1889, pp. 449, 450, 455; *Oates, ed. Hume's Nests & Eggs*, iii. p. 367 (1890).

Turnix pugnax, *Fitzinger, Atl. Nat. Vög.* fig. 240 (1864); *Gray, Hand-l. B.* ii. p. 271, no. 9749 (1870); *Stoliczka, J. As. Soc. Beng.* xxxix. p. 333 (1870); *Hume, Str. F.* iii. p. 178 (1875) [Upper Pegu]; *id. Nests & Eggs*, iii. p. 553 (1875); *Hume & Inglis, Str. F.* v. p. 45 (1877) [N.E. Cachar]; *Butler, Str. F.* v. p. 222 (1877) [Deesa]; *Fairbank, Str. F.* v. p. 409 (1877) [base of Palani Hills].

Turnix rostrata, *Swinhoe, Ibis*, 1865, p. 543 [Formosa], 1866, pp. 131, 403, 1867, p. 232.

Turnix ocellata, *Beavan, Ibis*, 1868, p. 387 [Sikhim]; *Blanford, Ibis*, 1870, p. 470 [Pegan, Irawadi]; *Seebohm, Ibis*, 1887, p. 179 [Loo-choo Is.].

Areoturnix rostrata, *Swinhoe, P. Z. S.* 1871, p. 401 [S. Formosa]; *David & Oustalet, Ois. Chine*, p. 399 (1877).

Areoturnix blakistoni, *Swinhoe, P. Z. S.* 1871, p. 401 [Canton]; *David & Oustalet, Ois. Chine*, p. 399 (1877).

Turnix plumbipes, *Blyth & Walden, Cat. Mamm. & B. Burma*, p. 152 (1875); *Oates, Str. F.* v. p. 164 (1877) [Pegu]; *Hume & Davison, Str. F.* vi. pp. 450, 521 (1878) [Tenasserim]; *Hume, Str. F.* viii. p. 69 (1879); *Scully, Str. F.* viii. p. 350 (1879) [Nepal Valley]; *Hume & Marshall, Game B.* ii. p. 177, pl. (1879); *Müller, J. f. O.* 1882, p. 433 [Salanga I.]; *Kelham, Ibis*, 1882, p. 5 [Western Malayana]; *Oates, Str. F.* x. p. 236 (1882) [Pegu]; *id. B. Burmah*, ii. p. 337 (1883); *Hume, Str. F.* xi. p. 310 (1883) [Manipur].

Turnix blakistoni, *Stejneger, P. U. S. Nat. Mus.* 1886, p. 635; *id. Zeit. ges. Orn.* iv. p. 170 (1888) [Loo-choo Is.].

Adult female. General colour above rufous or greyish brown or any intermediate colour; a more or less distinct white stripe down the middle of the head. Feathers on the forehead, lores, sides of the face, throat, and neck white, each with a subterminal black spot. Scapulars, back, rump, upper tail-coverts, and tail barred and vermiculated with black; all the scapulars and some of the other feathers with the lateral part of the margin edged with whitish buff.

Primaries, primary-coverts, and secondaries blackish brown, narrowly margined on the outer web with buff or white, the outer web of the outer secondaries being also toothed with the same colour; rest of the wing-coverts rufous or brown on the inner web and buff on the outer, and barred with black. Middle of the throat and chest deep black; sides of the chest and the breast buff barred with black; belly and rest of the underparts rusty buff, paler in the centre. Iris pale straw-white; bill, legs, and feet lavender-grey, slightly dusky towards the tip of the culmen. Total length 6·7 inches, wing 3·6, tail 1·2, tarsus 0·95.

Immature females differ from the adult only in lacking the black throat.

Adult male. Differs from the female only in having the chin and the centre of the throat white and the middle of the chest barred like the sides, as well as by its smaller size. Iris pale whitish straw; bill plumbeous; legs and feet bluish flesh-colour. Total length 5·6 inches, wing 3·1, tail 1·2, tarsus 0·85.

Quite young males differ from the adult in having rounded black spots on the chest and breast instead of bars: the wing-coverts have more buff, and the outer webs of the primaries and secondaries are more widely and irregularly edged with buff—nearly all the latter being sometimes also toothed with the same colour.

A *nestling* is covered with down, and resembles a young Partridge or Quail.

Note.—Like all birds of this genus there is a general tendency to uniformity of coloration in the plumage of the upper surface of very old specimens, the bars, spots, and markings gradually disappearing.

Hab. India and N. Ceylon, ranging eastward of the Bay of Bengal through Burma and Tenasserim to the Malay Peninsula, Siam, China, Formosa, and Loo-choo Islands.

a, b. ♂ ♀ ad. st.	India.	
c–g. ♂ ♀ ad. sk.	Coimbatore, Oct. (*A. G. R. Theobald*).	Hume Coll.
h, i. ♂ ♀ ad. sk.	Mysore, July and Aug.	W. Davison, Esq. [P.]
k, l. ♀ ad. et imm. sk.	Mysore, Aug. (*R. G. W. R.*).	Tweeddale Coll.
m. ♀ ad. sk.	Madras.	Dr. Jerdon [P.].
n–r. ♂ ♀ ad. sk.	Madras.	Hume and Gould Colls.
s, t. ♂ ad. et ♀ imm. sk.	Belgaum, Feb., Nov. (*E. A. Butler*).	Hume Coll.
u. ♀ nr. ad. sk.	Dopuli, S. Konkan, Jan. (*G. Vidal*).	Hume Coll.
v, w. ♀ ad. sk.	Ahmednugger, May, Oct. (*H. J. Bruce and S. B. Fairbank*).	Hume and Tweeddale Colls.
x. ♀ ad. sk.	Tapti Valley, W. Khandeish.	Hume Coll.
y–a′. ♂ ♀ ad. sk.	Khandeish.	Tweeddale Coll.
b′. ♂ ad. sk.	Godra, Panchmehals, Sept.	Hume Coll.
c′–e′. ♂ ad. et ♀ imm. sk.	Deccan (*Sykes*). (Type of *Hemipodius taigoor*, Sykes.)	India Museum [P.].
f′. ♂ ad. sk.	Deesa, Aug. (*E. A. Butler*).	Hume Coll.

g'. ♀ imm. sk.	Kutch, Oct.	Hume Coll.
h'. ♀ ad. sk.	Jhansie.	Hume Coll.
i'–l'. ♂ ad. et ♀ imm. sk.	N.W. Provinces.	Capt. S. Pinwill [P.].
m'. ♀ imm. sk.	Cawnpur, Dec. (*W. E. Brooks*).	Hume Coll.
n'. ♀ imm. sk.	Jubbulpur.	Tweeddale Coll.
o'–v'. ♂ ♀ ad. sk.	Raipur, Jan., Aug.	Hume Coll.
w'. ♀ nr. ad. sk.	Bengal (*Hardwicke*).	India Museum [P.].
x', *y'*. ♂ ♀ ad. sk.	Maunbhoom, Jan. (*R. C. Beavan*).	Hume and Tweeddale Colls.
z'–b''. ♂ ♀ ad. sk.	Calcutta, July, Aug.	Hume Coll.
c''. ♀ imm. sk.	E. Burdwan, Feb. (*R. C. Beavan*).	Tweeddale Coll.
d''. ♀ ad. sk.	Muddapur, Aug. (*W. E. Brooks*).	Hume Coll.
e''. ♀ imm. sk.	Oudh.	Tweeddale Coll.
f''–m''. ♂ ♀ ad. et imm. sk.	Nepal Valley.	B. H. Hodgson, Esq. [P.]. (Types of *Hemipodius plumbipes*, Hodgs.)
n''. ♂ ad. sk.	Nepal Valley, Sept. (*J. Scully*).	Hume Coll.
o''–v''. ♂ ♀ ad. et imm. sk.	Sikhim, March to June (*L. Mandelli*).	Hume Coll.
w'', *x''*. ♀ ad. sk.	Darjeeling.	Hume Coll.
y''. ♂ ad. sk.	Mongphoo, May (*J. Gammie*).	Hume Coll.
z''–d^3. ♂ ♀ ad. sk.	Native Sikhim, June to Aug. (*L. Mandelli*).	Hume Coll.
e^3. ♀ imm. sk.	Assam (*W. Griffith*).	India Museum [P.].
f^3–*k*^{3}. ♂ ♀ ad. sk.	Dibrughur, May, July, Aug., Oct. (*J. R. Cripps*).	Hume Coll.
l^3. ♂ ad. sk.	Shillong, Aug. (*J. Cockburn*).	Hume Coll.
m^3, *n*^{3}. ♂ ad. sk.	Shillong, June, July (*A. W. Chennell*).	Tweeddale Coll.
o^3, *p*^{3}. ♂ ad. et ♀ imm. sk.	Cachar, March (*J. Inglis*).	Hume Coll.
q^3, *r*^{3}. ♂ ad. sk.	Manipur, April (*A. O. H.*).	Hume Coll.
s^3. ♂ ad. sk.	Tipperah, March.	Hume Coll.
t^3–*w*^{3}. ♂ ♀ ad. sk.	Thayetmyo, May (*E. W. Oates*).	Hume Coll.
x^3–*a*^{4}. ♂ ♀ ad. et imm. sk.	Thayetmyo, Sept. (*R. G. W. R.*).	Tweeddale Coll.
b^4–*e*^{4}. ♂ ♀ imm. sk.	Karennee, March (*R. G. W. R.*).	Tweeddale Coll.
f^4–*i*^{4}. ♂ ♀ ad. sk.	Tonghoo, May (*R. G. W. R.*).	Tweeddale Coll.
k^4–*o*^{4}. ♂ ♀ ad. et imm. sk.	Pegu, March, July, Aug.	Oates and Seebohm Colls.
p^4. ♂ ad. sk.	Kaukaryit, Aug. (*J. D.*).	Hume Coll.
q^4. ♂ ad. sk.	Pahbyouk, March (*W. Davison*).	Hume Coll.
r^4, *s*^{4}. ♀ ad. et juv. sk.	Tavoy, April (*J. Darling*).	Gould and Hume Colls.
t^4–*w*^{4}. ♂ ♀ ad. et imm. sk.	Bankasoon, March, April, May (*W. Davison*).	Hume Coll.
x^4–*d*^{5}. ♂ ♀ ad. sk.	Kossoom, May, June (*J. D.*).	Hume Coll.

e^5–g^5. ♂ ♀ ad. sk.	Taroar, Feb. (*J. D.*).	Hume Coll.
h^5. ♂ ad. sk.	Tongkah, Jan. (*J.D.*).	Hume Coll.
i^5–o^5. ♂ ♀ ad. sk.	Salang, Feb., Mar. (*J. D.*).	Hume Coll.
p^5, q^5. ♂ ♀ ad. sk.	Prov. Wellesley, Dec.	A. McKinlay, Esq. [P.].
r^5, s^5. ♂ ♀ ad. sk.	Penang.	Oates Coll.
t^5–x^5. ♂ ♀ ad. sk.	Penang (*Dr. Cantor*).	India Museum [P.].
y^5–v^6. ♂ ♀ ad. et imm. juv. sk.	Klang, Jan. to July (*W. Davison*).	Hume Coll.
w^6. ♀ imm. sk.	Kuroo (Native State), Nov. (*W. Davison*).	Hume Coll.
x^6. ♀ ad. sk.	Malacca.	Eyton Coll. (Type of *Hemipodius atrogularis*, Eyton.)
y^6–n^7. ♂ ♀ ad. et imm. sk.	Malacca, Jan., July, Aug. Sept.	Hume Coll.
o^7–y^7. ♂ ♀ ad. sk.	Malacca.	
z^7. ♀ ad. sk.	Mt. Ophir, Malacca, Aug. (*R. G. W. R.*).	Tweeddale Coll.
a^8. ♂ ad. sk.	Singapore.	Purchased.
b^8–e^8. ♂ ♀ ad. sk.	Singapore.	Hume Coll.
f^8–p^8. ♂ ♀ ad. et imm. sk.	Singapore I., Feb., July, Oct., Nov. (*W. Davison*).	Hume Coll.
q^8. ♀ ad. sk.	Siam (*Schomburgk*).	Gould Coll.
r^8. ♂ ad. sk.	Nahconchaisee, Siam, June (*L. Laglaize*).	Tweeddale Coll.
s^8. ♂ ad. sk.	Canton (*T. Blakiston*).	Seebohm Coll. (Type of *Areoturnix blakistoni*, Swinh.)
t^8–w^8. ♂ ♀ ad., imm., et juv. sk.	Formosa, Feb., March, April (*R. Swinhoe*).	Tweeddale and Seebohm Colls.
x^8–z^8. ♂ ad. et ♀ imm. sk.	Takow, Jan., May, Dec. (*R. Swinhoe*).	Tweeddale and Seebohm Colls. (Type of *Turnix rostrata*, Swinh.).
a^9. Pull. sk.	Taiwan (*R. Swinhoe*).	Seebohm Coll.
b^9. ♀ ad. sk.	Loo-choo Is., Aug. (*H. Pryer*).	Seebohm Coll.

Subspecies *a*. Turnix pugnax.

? La Caille de Java, *Brisson, Orn.* i. p. 251 (1760); *Buff. Hist. Nat. Ois.* ii. p. 479 (1771).

? Noisy Quail, *Lath. Gen. Syn.* ii. pt. ii. p. 787 (1783); *id. Gen. Hist.* viii. p. 309 (1823).

? Tetrao suscitator, *Gm. S. N.* i. pt. ii. p. 763 (1788).

? Perdix suscitator, *Lath. Ind. Orn.* ii. p. 654 (1790); *Vieill. N. Dict. d'Hist. Nat.* xxv. p. 263 (1817).

? Coturnix suscitator, *Bonnat. Tabl. Encycl. Méth.* i. p. 222 (1791).

Hemipodius pugnax, *Temm. Pig. et Gall.* iii. pp. 612, 754 (1815) [Java]; *Schinz, Nat. Abbild. Vög.* p. 268 (1833); *id. Nat. Vögel.* p. 165, pl. 80 (1853).

Ortygis luzoniensis, *Horsf. Trans. Linn. Soc.* xiii. p. 185 (1822) [Java].

Tetrao luzoniensis, *Raffl. Trans. Linn. Soc.* xiii. p. 324 (1822) [Sumatra].

Fighting Quail, *Lath. Gen. Hist.* viii. p. 341 (1823).

Turnix pugnax, *Blyth, Ibis*, 1867, p. 309 [Ceylon]; *Nicholson, Ibis*, 1881, p. 155 [Java]; *Grant, Ibis*, 1889, pp. 449, 450, 458.

Turnix taigoor, *Holdsw. P. Z. S.* 1872, p. 470 [part.]; *Legge, Ibis*, 1874, p. 26, 1875, p. 400 [S. Ceylon]; *id. B. Ceylon*, iii. p. 761 (1880) [part.].

Turnix (Hemipodius) pugnax, *Snelleman, in Veth's Midden-Sumatra*, iv. p. 45 (1887).
Areoturnix pugnax, *Vorderm. Nat. Tijdschr. Ned. Ind.* xlix. p. 70 (1889) [Sumatra].
Areoturnix plumbipes, *Vorderm. Nat. Tijdschr. Ned. Ind.* l. p. 513 (1890) [Billiton].

Adult female. Only differs from the adult female of *T. taigoor* in always having a fairly marked rufous nuchal collar, which is distinctly differentiated from the colour of the back, and indicates an approach towards *T. fasciata*, the Philippine species. Iris light straw-colour. Total length 6·6 inches, wing 3·5, tail 1·2, tarsus 1.

Adult male. Resembles the male of *T. taigoor*.

Hab. Billiton, Java, Sumatra, and S.W. of Ceylon.

a. ♂ ad. sk.	Colombo, Ceylon, June (*Hart*).	Hume Coll.
b. ♂ ad. sk.	Ceylon.	Hume Coll.
c–g. ♂ ♀ ad. sk.	Ceylon, March, Nov. (*S. Chapman*).	Tweeddale Coll.
h–m. ♂ ♀ ad. sk.	Java.	Tweeddale Coll.
n, o. ♀ ad. sk.	Java.	Salvin-Godman Coll.
p, q. ♂ ♀ ad. sk.	Sumatra.	Wallace Coll.
r. ♀ nr. ad. sk.	Sumatra, Sept. (*C. Bock*).	Tweeddale Coll.

2. Turnix fasciata.

Hemipodius fasciatus, *Temm. Pig. et Gall.* iii. pp. 634, 757 (1815) [Philippine Is.].
Turnix fasciata, *Gray, Hand-l. B.* ii. p. 270, no. 9740 (1870); *Tweeddale, P. Z. S.* 1877, p. 701 [Luzon]; *Ramsay, Orn. Works Tweedd.*, App. p. 659 (1881); *Grant, Ibis*, 1889, pp. 449, 450, 459.
Turnix nigrescens, *Tweeddale, P. Z. S.* 1877, p. 765 [Zebu]; *Ramsay, Orn. Works Tweedd.*, App. p. 659 (1881); *Sharpe, Ibis*, 1888, p. 203 [Palawan]; *Whitehead, Ibis*, 1890, p. 58 [Palawan].
Turnix haynaldi, *Blasius, Ornis*, iv. p. 317 (1888) [Palawan].

Adult female. Differs from the female adult of *T. taigoor* in having the feathers of the top of the head black with dark grey margins; no white stripe down the centre of the head; a wide well-defined rufous nuchal collar; the back, rump, upper tail-coverts, and scapulars nearly black vermiculated with grey, and here and there rufous towards the margins; the abdomen pale buff, the flanks and under tail-coverts more rufous. Iris white; bill yellow at the base, greenish as the tip; legs yellow. Total length 6 inches, wing 3·4, tail 1·1, tarsus 1.

Immature females. Resemble those of *T. taigoor*, but have a well-developed rufous nuchal collar, and the belly pale whitish buff. Iris white; bill greenish chrome clouded with blackish green; legs greenish chrome.

Adult male. Has the upper surface like that of the female, but the rufous nuchal collar is entirely absent; the rest of the plumage resembles that of the male of *T. taigoor*, but the belly is somewhat paler. Total length 5·2 inches, wing 3, tail 1·1, tarsus 0·9.

In *immature males*, like immature females, the rufous nuchal collar is well developed at first, but as age increases it gradually disappears, together with the rufous bars in the plumage of the upper parts. Iris white; bill blackish, base yellow; legs light greenish yellow.

A *quite young bird* resembles *T. taigoor* of the same age, but the plumage of the upper parts is darker.

Hab. Philippine Islands, Palawan.

a–f. ♂ ad., imm., et juv. sk.	Manilla, Luzon, Philippine Is., Aug. (*Maitland Heriot*).	Tweeddale Coll.
g. ♀ nr. ad. sk.	Laguna de Bai, Nov. (*A. H. Everett*).	Tweeddale Coll.
h–o. ♂ ♀ imm. sk.	Monte Alban, Feb., March (*A. H. Everett*).	Tweeddale Coll.
p, q. ♂ ♀ ad. sk.	Zebu, April (*A.H.Everett*). (Types of *Turnix nigrescens*, Tweedd.)	Tweeddale Coll.
r. ♀ ad. sk.	SanAntonio,Negros,March (*E. L. Moseley*).	Steere Expedition.
s. ♀ ad. sk.	Dumaguete, Negros, Feb. (*E. L. Moseley*).	Steere Expedition.
t. ♂ ad. sk.	Palawan, July.	J. Whitehead, Esq. [P.].

3. Turnix rufilatus.

Turnix fasciatus, *Gould* (*nec Temm.*), *Birds of Asia*, vii. pl. 11 (1861) [Celebes].

Turnix rufilatus, *Wallace*, *P. Z. S.* 1865, p. 480 [Celebes]; *Grant*, *Ibis*, 1889, pp. 449, 460.

Turnix rufilata, *Gray*, *Hand-l. B.* ii. p. 270, no. 9737 (1870).

Adult female. General tone above warm brown, greyish on the mantle, and inclining to rufous on the rump, each feather vermiculated with black, and some in the middle of the back and scapulars with a subterminal black blotch. Feathers of the top of the head black margined with rusty brown; lores black; superciliary stripe and sides of the head white and black. Chin, throat, chest, and breast white barred with black; middle of belly whitish buff; sides of belly, flanks, and under tail-coverts rusty buff. Wings and wing-coverts as in *T. taigoor*, but the outer primary only is edged with whitish buff. Bill and feet pale greenish yellow. Total length 6·6 inches, wing 3·6, tail 1·3, tarsus 1·1.

A nearly adult female differs from the above in having the lower part of the back more rufous and the black markings coarser, the feathers in the middle of the back and the scapulars ornamented with large subterminal blotches, the sides margined with white, and the bill not so large and strong.

Adult male. Resembles the nearly adult female, but there is rather more rust-colour intermixed with the scapulars, and the chin and middle of the throat are white. Bill and feet greenish yellow. Total length 5·6 inches, wing 3·4, tail 1·1, tarsus 0·95.

Hab. Celebes.

a–c. ♂ ♀ ad. et nr. ad. sk.	Macassar, Celebes (*A. R. Wallace*).	Wallace and Gould Colls. (Types of the species.)
d, e. ♂ ♀ nr. ad. st.	Celebes.	Purchased.

4. Turnix powelli.

Turnix powelli, *Guillemard, P. Z. S.* 1885, p. 510, pl. xxix. [Sumbawa]; *Grant, Ibis*, 1889, pp. 449, 461.

Somewhat resembles *T. rufilatus*, but distinguished by the entire absence of rufous on the abdomen and thighs. The cervix is darker, the barring on the breast more distinct and extending much lower, and the black stripe on the throat of the male more restricted. (*Guillemard.*)

Hab. Gunong Api Island, Sumbawa.

5. Turnix sylvatica.

Gibraltar Quail, *Lath. Gen. Syn.* ii. pt. ii. p. 790 (1783); *id. Gen. Hist.* viii. p. 336 (1823).

Andalusian Quail, *Lath. Gen. Syn.* ii. pt. ii. p. 791, pl. (1783); *id. Gen. Hist.* viii. p. 337, pl. cxxxii. (1823).

Tetrao sylvaticus, *Desfontaines, Mém. Ac. R. Sc. Paris*, 1787, p. 500, pl. xiii.

Tetrao andalusicus, *Gmel. S. N.* i. pt. ii. p. 766 (1788).

Tetrao gibraltaricus. *Gmel. S. N.* i. pt. ii. p. 766 (1788).

Perdix andalusica, *Lath. Ind. Orn.* ii. p. 656 (1790).

Perdix gibraltarica, *Lath. Ind. Orn.* ii. p. 656 (1790).

Turnix andalusica, *Bonn. Tabl. Encycl. Méth.* i. p. 7 (1791); *Vieill. N. Dict. d'Hist. Nat.* xxxv. p. 45 (1819); *Olphe-Galliard, Faun. Orn. Europe Occ.* fasc. xxxix. p. 53 (1886).

Turnix gibraltarica, *Bonn. Tabl. Encycl. Méth.* i. p. 7 (1791); *Vieill. N. Dict. d'Hist. Nat.* xxxv. p. 45 (1819).

Turnix africanus, *Bonn. Tabl. Encycl. Méth.* i. p. 6 (1791); *Hewitson, Ibis*, 1859, p. 79 [Kobah forest, near Algiers]; *Tristram, Ibis*, 1860, p. 72 [Atlas Mountains and Algerian Sahara]; *Fritsch, Nat. Vög. Europa's*, p. 287 (1870) pl. xxxii. fig. 11 (1871).

Ortygis gibraltaricus, *Illiger, Prodromus*, p. 242 (1811); *Keys. & Blas. Wirbelth. Europa's*, p. 203 (1840).

Hemipodius tachydromus, *Temm. Pig. et Gall.* iii. pp. 626, 756 (1815); *id. Man. d'Orn.* ii. p. 494 (1820); *Werner, Atl. Ois. d'Eur.* Order 10, pl. 21 (1828); *Gould, B. Europe*, iv. p. 264, pl. (1837); *Temm. Man. d'Orn.* pt. 4, p. 340 (1840); *Schinz, Europ. Faun.* i. p. 291 (1840); *Malh. Faun. Sicil.* p. 155 (1843); *March, Rev. Zool.* 1874, pl. xi.

Hemipodius lunatus, *Temm. Pig. et Gall.* iii. pp. 629, 756 (1815); *id. Man. d'Orn.* ii. p. 495 (1820); *Werner, Atl. Ois. d'Eur.* Order 10, pl. 22 (1828); *Schinz, Europ. Faun.* i. p. 291 (1840).

Ortygis andalusica, *Keys. & Blas. Wirbelth. Eur.* p. 202 (1840).

Turnix andalussica, *Benoit, Orn. Sicil.* p. 122 (1840).

Turnix andalusicus, *Degl. Orn. Europ.* ii. p. 66 (1849).

Turnix gibraltarius, *Brehm, Vögelfang*, p. 277 (1855).

Turnix albigularis, *Malh. Faune Orn. de l'Alg.* p. 26 (1855).

Turnix sylvaticus, *Bonap. Cat. Parzud.* p. 13 (1856); *Degl. & Gerbe, Orn. Europ.* ii. p. 84 (1867).

Turnix gibraltariensis, *v. Homeyer, J. f. O.* 1862, p. 420.
Turnix sylvatica, *Drake, Ibis*, 1867, p. 428 [Tangier and E. Morocco]; *Smith, Ibis*, 1868, p. 450 [Portugal]; *Doderl. Avifaun. Mod. & Sicil.* p. 168 (1869–71); *Gray, Hand-l. B.* ii. p. 270, no. 9729 (1870); *Saunders, Ibis*, 1871, p. 224 [S. Spain]; *Gurney, Ibis*, 1871, p. 296; *Heugl. Orn. N.O.-Afr.* ii. p. 909 (1873); *Lilford, Ibis*, 1875, pp. 21, 24 [Sicily]; *Irby, Orn. Gibraltar*, p. 139 (1875); *Dresser, B. Europe*, vii. p. 249, pl. 494 (1876); *Giglioli, Ibis*, 1881, p. 207; *Saund. ed. Yarrell's Brit. B.* iii. p. 131 (1882–84); *Chapman, Ibis*, 1884, p. 93 [S. Spain]; *Reid, Ibis*, 1885, p. 251 [near Tangier]; *Salvad. El. Ucc. Ital.* p. 202 (1887); *Tait, Ibis*, 1887, p. 381 [S. Portugal]; *Koenig, J. f. O.* 1888, p. 255 [Tunis]; *Grant, Ibis*, 1889, pp. 450, 462.

Adult female. General colour above dull light red, the feathers of the top of the head, back, rump, upper tail-coverts, tail, and scapulars barred and margined internally with black, externally with white or grey, giving the back a scaly appearance, which is often increased by the pattern of black and dull light red following the shape of the feathers instead of crossing them transversely; a white band down the middle of the head; lores, superciliary stripes, and sides of the head and neck white tipped with black. Primaries, primary-coverts, and secondaries brownish black, the outer web of all edged and in the outer secondaries also vermiculated with buff and spotted with white; rest of the wing-coverts dull light red, obliquely barred on the outer or both webs with black and white. Chin and middle of throat white; sides of the chest and breast whitish buff, each feather with a heart-shaped subterminal black spot; centre of the chest bright rust-colour, paler on the flanks and under tail-coverts; rest of underparts whitish buff. Centre pair of tail-feathers elongate and pointed. Total length 7 inches, wing 3·7, tail 1·8, tarsus 0·9.

Adult male. Differs from the female only in being somewhat paler on the underparts and in the scale-like marking on the feathers of the upper parts extending right over the nape to the back of the head. In the female the nape is nearly uniform dull light red. Total length 6 inches, wing 3·1, tail 1·5, tarsus 0·85.

An *immature female* has the general paler colour of the male, but differs in having the wing-coverts pale rufous buff irregularly barred with black and spotted on the edge of the outer web with white.

Hab. S. Europe and N. Africa.

a, b. ♀ ad. sk.	Malaga, Spain, June (*H. Saunders*).	Tweeddale Coll.
c, d. ♂ ♀ ad. sk.	Gibraltar, Feb.	Lt.-Col. Irby [P.].
e–g. ♂ ♀ ad. sk. et imm. st.	Algeria.	Gould Coll.
h, i. ♀ ad. et imm. sk.	Biskra, Algeria (*Loche*).	Shelley Coll.
k. ♀ ad. st.		Vernon Harcourt, Esq. [P.].

Subsp. α. Turnix lepurana.

Ortygis lepurana, *Smith, Rep. of Exp.*, App. p. 55 (1836) [Kurrichane]; *Cab. J. f. O.* 1878, p. 243 [Teita].

Hemipodius lepurana, *Smith, Illustr. Zool. S. Afr.* pl. xvi. (1838).

Turnix lepurana, *Strickl. & Sclat. in Jard. Contr. Orn.* p. 158 (1852); *Gurney, Ibis*, 1860, p. 216 [Natal]; *Layard, B. S. Afr.* p. 276 (1867); *Gray, Hand-l. B.* ii. p. 270, no. 9732 (1870); *Bocage, Av. Afr. Occid.* iv. p. 18 (1870); *Finsch & Hartl. Vög. Ost-Afr.* p. 593 (1870); *Shelley & Buckley, Ibis*, 1872, p. 290 [Gold Coast]; *Sharpe, Ibis*, 1872, p. 73 [Accra]; *Gurney's ed. Andersson's B. Damaraland*, p. 249 (1872); *Buckley, Ibis*, 1874, p. 387 [Matabele Land]; *Bocage, J. f. O.* 1876, p. 306 [Ambaca, Loanda]; *Fischer & Reich. J. f. O.* 1878, pp. 249, 293 [Zanzibar], & 1879, pp. 284, 339 [Malindi, Mambrui, and Tana]; *Bocage, Orn. Angola*, p. 413 (1881); *Hartl. Abh. nat. Ver. Brem.* vii. p. 119 (1881) [West of Albert Nyanza]; *Shelley, P. Z. S.* 1881, p. 598 [Lamu]; *Butl., Feild., & Reid, Zool.* (3), vi. p. 339 (1882) [Newcastle, Natal]; *Böhm, J.f. O.* 1882, p. 196 [Kakoma]; *Shelley, Ibis*, 1882, p. 361 [Bamangwato]; *Sharpe's ed. Layard's B. S. Afr.* p. 608 (1884); *Fischer, Zeit. ges. Orn.* i. p. 382 (1884) [Pangani]; *id. J. f. O.* 1885, p. 117; *Ayres, Ibis*, 1885, p. 346, 1886, p. 292 [Transvaal]; *Matschie, J. f. O.* 1887, p. 145 [Marungu]; *Schalow, J. f. O.* 1887, p. 226; *Grant, Ibis*, 1889, pp. 450, 462; *Emin, J. f. O.* 1891, p. 58 [Ugogo], pp. 537, 539 [Victoria Nyanza]; *Reichenow, J.f. O.* 1891, p. 142 [Unyamuesi and Unyanyembe], 1892, p. 11; *Sharpe, Ibis*, 1892, p. 550 [Kikumbuliu and Sük Country]; *Barnes, Ibis*, 1893, p. 168 [Aden]; *Shelley, Ibis*, 1894, p. 25 [Zomba].

Ortyxelus lepuranus, *Heugl. J. f. O.* 1862, p. 415 [E. Kordofan].

This is really only a small race of *T. sylvatica*, the plumage of both being absolutely identical in birds of the same sex and age.

Adult female. Total length 5·7 inches, wing 3·2, tail 1·7, tarsus 0·9. Iris very pale yellow; bill bluish horn-colour, with the tip black; tarsi and feet pale.

Adult male. Total length 5 inches, wing 2·9, tail 1·5, tarsus 0·8.

Hab. Africa south of about 13° N. lat.; recently obtained at Aden.

a. ♂ ad. sk.	Gold Coast, March.	Shelley Coll.
b. ♂ ad. sk.	Plains of Accra, Fantee, Feb. (*Ussher*).	Shelley Coll.
c–k. ♂ ♀ ad. sk.	Accra, Feb., April, May.	Shelley Coll.
l, m. ♂ ♀ ad. sk.	C. C. Castle, March.	Shelley Coll.
n–s. ♂ ♀ ad. sk.	Landana.	M. L. Petit [C.].
t. ♂ ad. sk.	S. Africa.	Shelley Coll.
u, v. ♀ ad. sk.	Kurrichane.	Sir A. Smith. (Type of the subspecies.)
w. ♂ ad. sk.	Kroonstad, April.	J. H. Gurney, Esq. [P.].
x. ♂ ad. sk.	Potchefstroom, Sept. (*T. Ayres*).	J. H. Gurney, Esq. [P.].
y, z. ♀ ad. sk.	Zomba, Oct., Nov. (*A. Whyte*).	Consul H. H. Johnston [P.].
a', b'. ♂ ♀ ad. sk.	Lamu (*Sir J. Kirk*).	Shelley Coll.
c'. ♀ ad. sk.	Aden, Jan.	H. E. Barnes, Esq. [P.].

6. Turnix dussumieri.

Hemipodius dussumieri, *Temm. Pl. Col.* v. pl. 454. fig. 2 (1828).
Hemipodius variabilis, *Hodgs. MS.* (?), *Bengal Sport. Mag.* 1837, p. 345.
Hemipodius sykesi, *Smith, Ill. Zool. S. Afr.* ii. (*see* H. lepurana, pl. 16, footnote) (1838).
Turnix dussumieri. *Swinhoe, Ibis*, 1861, p. 341 [Amoy to Hongkong] *Blyth, Ibis*, 1867, p. 161; *Gould, Birds of Asia*, vii. pl. 10 (1869); *Gray, Hand-l. B.* ii. p. 270, no. 9736 (1870); *Swinhoe, P. Z. S.* 1871, p. 401 [Takow, Formosa]; *Hume, Str. F.* i. p. 227 (1873) [Sind]; *Adam, Str. F.* ii. p. 338 (1874) [Sambhur Lake]; *Ball, Str. F.* ii. p. 428 (1874); *Fairbank, Str. F.* iv. pp. 262, 266 (1876) [Deccan]; *Butler, Str. F.* iv. p. 9 (1876) [N. Guzerat]; *David & Oustalet, Ois. Chine*, p. 397 (1877); *Davidson & Wenden, Str. F.* vii. p. 87 (1878) [Deccan]; *Hume, Str. F.* vii. p. 186 (1878) [E. Narra and Hyderabad]; *Ball, Str. F.* vii. p. 226 (1878) [Central Provinces]; *Cripps, Str. F.* vii. p. 298 (1878) [Faridpur]; *Butl. Cat. B. Sind*, p. 56 (1879); *Hume & Marshall, Game B.* ii. p. 193, pl. (1879); *Vidal, Str. F.* ix. p. 77 (1880) [S. Konkan]; *Butl. Cat. B. S. Bombay*, p. 70 (1880); *Reid, Str. F.* x. p. 64 (1881) [Lucknow]; *Oates, Str. F.* x. p. 237 (1882) [Pegu]; *Davidson, Str. F.* x. p. 318 (1882) [W. Khandeish]; *Oates, B. Burmah*, ii. p. 336 (1883); *Swinhoe & Barnes, Ibis*, 1885, p. 132 [Central India]; *Hume, Str. F.* xi. p. 312 (1888) [Khasia Hills and Manipur]; *Grant, Ibis*, 1889, pp. 450, 462; *Oates's ed. Hume's Nests & Eggs*, iii. p. 371 (1890); *Hartl. Abh. nat. Ver. Brem.* xii. p. 324 (1892) [Hainan].
Turnix joudera, *Swinhoe, Ibis*, 1861, p. 50.
Turnix sykesii, *Jerd. B. Ind.* ii. p. 600 (1864); *Beavan, Ibis*, 1868, p. 387 [N. of Mt. Parisnath and Maunbhoom].

Adult female. This is the smallest species belonging to the genus. It closely resembles *T. lepurana* in general plumage, but may be at once distinguished by the wide golden-buff or straw-coloured margins of the scapulars. Total length 5 inches, wing 2·9, tail 1·5, tarsus 0·75.

Adult male. Resembles the female, but is generally paler and smaller. Total length 4·5 inches, wing 2·7, tail 1·3, tarsus 0·65.

In quite young birds the whole of the upper plumage is reddish brown, becoming brighter rufous on the nuchal region, and indistinctly barred with blackish brown and spotted with white, especially on the wing-coverts and chest. The latter is paler buff than that of the adult and spotted all over with black.

Hab. India, Pegu, Hainan, and Formosa.

a, b. ♂ ♀ ad. sk.	Deccan (*W. H. Sykes and Lieut. Burgess*).	Gould Coll.
c. ♂ ad. sk.	Deccan (*W. H. Sykes*).	India Museum [P.].
d. ♀ ad. sk.	Belgaum, May (*E. A. Butler*).	Hume Coll.
e. ♂ ad. sk.	Jhansie, Aug.	Hume Coll.
f. ♂ ad. sk.	Sambhur, July (*R. M. Adam*).	Hume Coll.
g–k. ♂ ♀ ad. sk.	Punjab, Jan. to April.	Hume Coll.
l, m. ♀ ad. sk.	Delhi, April.	Hume Coll.

n–u. ♂ ♀ ad. sk.	Sultanpur, Gurgaon Dist., May (*W. N. Chill*).	Hume Coll.
v, w. Imm. sk.	Simla, Oct. (*A. O. H.*).	Hume Coll.
x. ♀ ad. sk.	Syree, nr. Simla, Oct.	Hume Coll.
y. ♀ ad. sk.	Futtehgurh Dist. (*A. Anderson*).	Hume Coll.
z–b'. ♂ ♀ ad. sk.	Etawah, Jan., July (*W. E. Brooks*).	Hume Coll.
c', d'. ♂ ♀ ad. sk.	Cawnpur, April.	Hume Coll.
e'–g'. ♂ ♀ ad. sk.	Lucknow, May, Aug., Oct. (*G. Reid*).	Hume Coll.
h'–k'. ♂ ♀ ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
l'. ♀ ad. sk.	East Burdwan, Feb. (*R. C. Beavan*).	Tweeddale Coll.
m', n'. ♂ ♀ ad. sk.	Central Provinces, Jan., Dec.	Hume Coll.
o', p'. ♂ ♀ ad. sk.	Seoni Dist., Central Provinces.	Hume Coll.
q'–s'. ♀ ad. sk.	Raipur Dist.	Hume Coll.
t'. ♀ ad. sk.	Sumbulpur Dist., Dec.	Hume Coll.
u', v'. ♂ ♀ ad. sk.	Madras.	Gould Coll.
w', x'. ♀ ad. sk.	Pegu, July.	E. W. Oates, Esq. [C.].
y', z'. ♀ ad. sk.	Takow, Formosa, Dec. (*R. Swinhoe*).	Tweeddale and Seebohm Colls.

7. Turnix nana.

Hemipodius nanus, *Sundevall, Œfv. Vet.-Akad. Förhandl.* 1850, p. 110.
Turnix hottentota, *Shelley* (*nec Temm.*), *Ibis*, 1875, p. 85 [Natal].
Turnix hottentotta, *Sharpe's ed. Layard's B. S. Afr.* p. 607 [part.] (1884).
Turnix nana, *Grant, Ibis*, 1889, pp. 450, 463.

Adult female. General colour above black, barred and mottled with rufous, most of the feathers of the top of the head and back incompletely edged with white; rump and upper tail-coverts nearly uniform black; scapulars edged with golden buff; rest of the head, sides of the throat, chest, and upper breast bright buff, the ends of the feathers along the sides of the neck and breast regularly barred with black and white. Primaries, primary-coverts, and secondaries brownish black, the outer primaries margined on the outer web with buff; rest of the wing-coverts irregularly mixed with light red, buff, and white, with a more or less regular subterminal black bar and white extremity. Chin and centre of throat whitish; lower breast and belly white; flanks and under tail-coverts buff. Tail with the middle pair of feathers elongate and pointed and, like the scapulars and upper tail-coverts, edged with golden buff. Total length 5·8 inches, wing 3·2, tail 1·5, tarsus 0·9.

Adult male. Resembles the female, but the forehead is like the top of the head, the superciliary stripes and sides of the head and throat are much paler than the chest, and the black and white barring on the sides of the chest and breast extends further on to the chest: that is to say, two or three rows of feathers instead of

one have the tips black and white. Iris grey; upper mandible brown; lower one and the legs flesh-colour. Total length 5 inches, wing 2·9, tail 1·2, tarsus 0·9.

In a *quite young specimen* the whole of the underparts are white, except on the breast, where here and there the buff of the adult is just beginning to appear. The whole of the chest and breast is barred with black.

Hab. Africa south of about 10° S. lat. to the Great Karroo.

a, b. ♀ ad. sk.	King William's Town.	Lieut. Anstey [P.].
c–f. ♂ ♀ ad. et imm. sk.	Pinetown, Natal, March (*G. E. S. and T. L. Ayres*).	Shelley Coll.
g. ♀ ad. sk.	Accra, Jan.	Shelley Coll.
h. ♀ ad. st.	S. Africa.	Purchased.

8. Turnix hottentotta.

Hemipodius hottentottus, *Temm. Pig. et Gall.* iii. pp. 636, 757 (1815).
Hottentot Quail, *Lath. Gen. Hist.* viii. p. 345 (1823).
Turnix hottentotus, *Layard, B. S. Afr.* p. 276 (1867).
Turnix hottentota, *Layard, Ibis*, 1869, p. 375 [Swellendam; nests and eggs]; *Gray, Hand-l. B.* ii. p. 270, no. 9730 (1870).
Turnix hottentotta, *Sharpe's ed. Layard's B. S. Afr.* p. 607 [part.] (1884); *Grant, Ibis*, 1889, pp. 451, 464.

Adult female. Resembles the female of *T. nana* in plumage, but most of the feathers of the middle of the breast and abdomen are ornamented with a rounded subtermiual black spot. Total length 6·6 inches, wing 3·4, tail 1·7, tarsus 0·95.

Adult male is probably similar to the above, but the Museum does not possess a specimen in which the sex has been ascertained.

Young birds resemble the young of *T. nana*, but the belly as well as the breast is barred and spotted with black.

Hab. Extreme south of the African continent south of the Great Karroo.

a. ♀ ad. sk.	S. Africa.	J. Rocke, Esq. [P.].
b, c. ♀ ad. et imm. sk.	S. Africa.	Gould Coll.
d, e. ♀ ad. et imm. st.	S. Africa.	Purchased.
f. ♀ juv. sk.	Georgetown (*E. L. Layard*).	Shelley Coll.

9. Turnix blanfordi.

Turnix maculatus, *Vieill.* (*nec* Hemipodius maculosus, *Temm.*), *N. Dict. d' Hist. Nat.* xxxv. p. 47 (1819); *David & Oustalet, Ois. Chine*, p. 398 (1877).
Turnix blanfordi, *Blyth, J. As. Soc. Beng.* xxxii. p. 80 (1863) [Thayetmyo]; *id. & Walden Cat. Mamm. & B. Burma*, p. 151 (1875); *Grant, Ibis*, 1889, pp. 451, 452, 466; *Styan, Ibis*, 1891, pp. 329, 500 [Lower Yangtse basin]; *Sclat. Ibis*, 1892, p. 87; *de la Touche, Ibis*, 1892, p. 494 [Foochow].
Turnix maculosa, *Gray, Hand-l. B.* ii. p. 270, no. 9734 (1870); *Hume, Str. F.* iii. p. 179 (1875) [Kolidoo]; *Swinhoe, Ibis*, 1876, p. 508;

Hume & Marshall, Game B. ii. p. 183, pl. (1879); *Bingham, Str. F.* ix. p. 196 (1880) [Meplay R.]; *Oates, Str. F.* x. p. 236 (1882) [Pegu]; *id. B. Burmah*, ii. p. 338 (1883); *Hume, Str. F.* xi. p. 312 (1888) [Assam and Manipur].

Hemipodius maculatus, *Swinhoe, Ibis*, 1875, p. 127 [Chefoo].

Hemipodius viciarius, *Swinhoe, P. Z. S.* 1871, p. 402 [♂ ad.] (1871) [Canton to Pekin]; *Tacz. J. f. O.* 1876, p. 201; *id. Bull. Soc. Zool. Fr.* i. p. 245 (1876) [Ussuri, Chanka].

Hemipodius chrysostomus, *Swinhoe, Ann. Mag. N. H.* (4) xii. p. 375 [♀ ad.] (1873) [Chefoo].

Turnix maculosus, *Hume & Davison, Str. F.* vi. p. 452 (1878) [Tenasserim]; *Sclat. Voy. Chall.* p. 115 (1880).

Hemipodius cathareus, *Swinhoe, MS.* [♀ imm.].

Hemipodius variabilis, *Prjev. Voy. dans Ussuri*, no. 139.

Adult female. General colour above greyish brown, with a well-defined rufous nuchal collar; lores and forehead, superciliary stripes and sides of the head buff, tipped with black; top of the head black, edged with buff; in some specimens a line of buff feathers down the middle of the head. Back, rump, upper tail-coverts, and scapulars irregularly barred and vermiculated with black, mixed here and there with traces of rufous; some still retaining traces of the whitish-buff lateral margins characteristic of immature birds. Primaries, primary-coverts, and secondaries blackish brown, narrowly margined on the outer web with buff; rest of the wing-coverts buff, some of the outer secondary and most of the lesser and median coverts have a small subterminal black ocellus. Chin and middle of the throat whitish buff; sides of the throat, chest, and breast rufous buff, becoming paler on the flanks and white on the belly; most of the feathers of the sides of the chest and breast are ornamented by a small subterminal round black spot. Iris straw-yellow or white. Lower mandible, gape, and base of upper mandible chrome-yellow; rest of upper mandible reddish brown. Legs, feet, and claws chrome-yellow. Total length 6·5 inches, wing 3·8, tail 1·5, tarsus 1·05.

Adult male. Differs from the female in having no rufous nuchal collar. Iris white; bill and feet yellow. Total length 5·8 inches, wing 3·5, tail 1·3, tarsus 0·95.

Immature males and females resemble each other and differ from the adults in having all the feathers of the upper surface with a patch of rufous at the extremity, and narrowly margined laterally on one or both webs with buff; the round black spots on the wing-coverts and sides of the chest and breast are also more numerous.

Hab. India, east of the Bay of Bengal to the S. of Tenasserim, Siam, and China as far north as Mantchuria.

a. ♀ imm. sk.	Chittagong, Dec. (*H. Fasson*).	Hume Coll.
b. ♀ imm. sk.	Tipperah.	Hume Coll.
c,d. ♂ ♀ imm. sk.	Karennee, March (*R. G. W. R.*).	Tweeddale Coll.
e,f. ♂ ♀ ad. sk.	Tonghoo, April and Dec. (*R. G. W. R.*).	Tweeddale Coll.

g–*v*. ♂ ♀ ad. et imm. sk.	Pegu, Jan. to April (*E. W. Oates*).	Oates & Hume Colls.
w. ♀ imm. sk.	Khykehto, Jan. (*W. Davison*).	Hume Coll.
x. ♀ imm. sk.	Kolidoo, Jan. (*W. Davison*).	Hume Coll.
y. ♂ imm. sk.	Thoungyeen, April (*C. T. Bingham.*).	Hume Coll.
z. ♂ imm. sk.	Amherst, Jan. (*W. Davison*).	Hume Coll.
a'. ♂ imm. sk.	Mergui, Jan. (*W. Davison*).	Hume Coll.
b', *c'*. ♂ ♀ imm. sk.	Bankasoon, April (*W. Davison*).	Hume Coll.
d'. ♂ imm. sk.	Pakchan, Jan. (*W. Davison*).	Hume Coll.
e'. ♂ imm. sk.	Siam (*Schomburgk*).	Gould Coll.
f'. ♀ imm. sk.	Fokien, Sept. (*R. Swinhoe*).	Tweeddale Coll.
g'. ♀ imm. sk.	Hongkong.	'Challenger' Exped.
h'. ♂ nr. ad. sk.	Shanghai, Oct. (*R. Swinhoe*).	Tweeddale Coll.
i'–*l'*. ♂ ♀ ad. et imm. sk.	Chefoo, May, June (*R. Swinhoe*).	Tweeddale Coll.
m'. ♂ ad. sk.	S. of Mantchuria.	Dr. James [P.].

10. Turnix tanki.

Turnix tanki (*Buchanan Hamilton*), *Blyth, J. As. Soc. Beng.* 1843, p. 180; *Blyth, Ibis*, 1867, p. 161; *Grant, Ibis*, 1889, pp. 451, 452, 466; *Oates, Hume's Nests & Eggs*, iii. p. 370 (1890).

Hemipodius joudera, *Hodgs. Icon. ined. in Brit. Mus.* no. 121; *id. in Gray's Zool. Misc.* p. 85 (1844) [Nepal].

Hemipodius dussumieri? v. variabilis, *Hodgs. in Gray's Zool. Misc.* p. 85 (1844); *id. Icon. ined. in Brit. Mus.* nos. 122, 123.

Turnix joudera, *Gray, Cat. Mamm. & B. Nepal*, p. 129 (1846); *id. Gen. B.* iii. p. 131 [♀ ad.] (1846); *id. Hand-l. B.* ii. p. 270, no. 9735 (1870); *Ball, Str. F.* iv. p. 236 (1876) [Orissa]; *Butler, Str. F.* iv. p. 8 (1876) [N. Guzerat, Kattiawar, Cutch, Sind, Jodhpur]; *Hume, Str. F.* iv. p. 225 (1876); *Butler, Str. F.* v. p. 231 (1877) [Deesa]; *Ball, Str. F.* vii. p. 226 (1878) [Ganges to Godaveri]; *Butler, Cat. B. Sind*, p. 56 (1879); *Hume & Marsh. Game B.* ii. p. 187, pl. (1879); *Butl. Cat. B. S. Bombay*, p. 70 (1880); *Reid, Str. F.* x. p. 64 (1881) [Lucknow]; *Davidson, Str. F.* x. p. 318 (1882) [W. Khandeish]; *Davison, Str. F.* x. p. 412 (1883) [Wynaad]; *Swinhoe & Barnes, Ibis*, 1885, p. 132 [Central India]; *Macgregor, Str. F.* x. p. 441 (1887) [Belgaum]; *Terry, Str. F.* x. p. 479 (1887) [Palani Hills].

Turnix dussumieri, *Jerd.* (*nec Temm.*) *B. India*, ii. p. 599 (1863); *Beavan, Ibis*, 1868, p. 387 [Lower Bengal and Julpigoorie].

Adult female. Resembles *T. blanfordi* in general appearance, but may be at once distinguished by its smaller size and by having the whole of the back, rump, upper tail-coverts, and scapulars uniform greyish brown with fine wavy transverse bars of darker brown; the feathers of the top of the head black, each with a subterminal buff bar, and the rufous nuchal collar wider. Iris white; bill, legs, and feet yellow. Total length 5·5 inches, wing 3·4, tail 1·1, tarsus 0·85.

Adult male. Resembles the adult female, but has no rufous nuchal collar, and the transverse markings on the upper parts are coarser. Iris white; upper part of upper and tip of lower mandible dark

brown, remainder orange-yellow; legs and feet pale orange-yellow Total length 5·3 inches, wing 3, tail 1, tarsus 0·85.

Immature birds of both sexes resemble each other, and can only be distinguished from those of *T. blanfordi* by their smaller size.

Hab. Peninsula of India and east of the Bay of Bengal as far as Tipperah.

a. ♀ ad. sk.	Tipperah.	Hume Coll.
b. ♀ ad. sk.	Bhotan Doars, April.	Hume Coll.
c, d. ♀ ad. et imm. sk.	Nat. Sikkim, Mar., June (*L. Mandelli*).	Hume Coll.
e–i. ♂ ♀ ad. et nr. ad. sk.	Nepal.	B. H. Hodgson, Esq. [C.].
k, l. ♀ imm. sk.	Allahabad, Dec.	Hume Coll.
m, n. ♂ ad. et ♀ imm. sk.	Kumaon, May.	Hume Coll.
o, p. ♂ ♀ ad. sk.	Punjab, Feb. & March.	Hume Coll.
q. ♂ imm. sk.	N.W. India.	Capt. S. Pinwill [P.].
r. ♂ ad. sk.	Deesa, July (*E. A. Butler*).	Hume Coll.
s. ♀ nr. ad. sk.	Kamptee.	Dr. R. B. Hinde [P.].
t. ♀ ad. sk.	Poonah.	Colonel Sturt [P.].
u. ♂ imm. sk.	C. India.	Gould Coll.
v, w. ♂ ad. et ♀ imm. sk.	Raipur.	Hume Coll.
x. ♂ imm. sk.	Madras.	Gould Coll.
y. ♂ imm. sk.	Wynaad, May (*W. Davison*).	Hume Coll.
z. ♀ ad. sk.	India.	Tweeddale Coll.
a'. ♀ ad. sk.		Gould Coll.

11. Turnix albiventris.

Turnix albiventris, *Hume, Str. F.* i. p. 310 (1873) [Andamans]; *Hume & Marsh. Game B.* ii. p. 199, pl. (1879); *Grant, Ibis*, 1889, pp. 451, 452, 467.

Turnix joudera, *Hodgs.*?, albiventris, *Hume, Str. F.* ii. p. 281 (1874) [Nicobars], iv. pp. 279, 293 (1876).

Adult female. Differs from both *T. blanfordi* and *T. tanki* in retaining the rufous in the feathers of the back and in having the nuchal collar much wider and of a deeper rufous. It resembles the former in having the upper parts blotched and vermiculated with black, and the latter in its size and the markings of the top of the head. Total length 5·5 inches, wing 3·2, tail 1·2, tarsus 0·9.

Adult male. Scarcely differs in plumage from the male of *T. blanfordi*, the only apparent character being that some of the dorsal feathers are intermixed with rufous. Total length 5·3 inches, wing 3, tail 1·1, tarsus 0·85.

Immature birds of both sexes resemble one another, and cannot be distinguished from the immature of *T. tanki*.

Quite young specimens have the plumage like that of the immature, but paler, and the sides of the neck and chest and the lesser and median wing-coverts are tipped with white.

Hab. Andaman and Nicobar Islands.

a. ♀ imm. sk.	Nicobar Islands.	Tweeddale Coll.
b. ♀ ad. sk.	Nangcowry I., Nicobars, Dec. (*R. J. Wimberley*).	Tweeddale Coll.
c–g. ♂ ♀ ad., imm., et juv. sk.	Camorta I., Nicobars, Jan., Dec. (*R. J. Wimberley*).	Tweeddale Coll.
h–n. ♂ ♀ ad., imm., et pull. sk.	Camorta I., Nicobars, Feb. to May & Dec. (*W. Davison & A. de Roepstorff*).	Hume Coll.
o. ♂ nr. ad. sk.	Port Mouat, Andamans, Jan. (*W. Davison*).	Hume Coll. (Type of the species.)
p. ♀ ad. sk.	Port Blair, Andamans.	Hume Coll.

12. Turnix maculosa.

Hemipodius maculosus, *Temm. Pig. et Gall.* iii. pp. 631, 757 (1815).
Turnix maculosus, *Stephens, in Shaw's Gen. Zool.* xi. p. 394 (1819).
Turnix maculatus, *Vieill. Encycl. Méth.* i. p. 330 (1823); *id. Galerie des Ois.* ii. p. 51, pl. 217 [♀ ad. good] (1825).
Hemipodius melanotus, *Gould, P. Z. S.* 1837, p. 8 [Tasmania!]; *id. Syn. B. Austr.* text & pl. (1837–38); *id. B. of Austr.* v. pl. 84 (1848); *Ramsay, P. Linn. Soc. N.S.W.* iv. p. 92 (1879) [Port Moresby, New Guinea].
Turnix melanotus, *Gould, Handb. B. Austr.* ii. p. 182 (1865); *Gray, Hand-l. B.* ii. p. 270, no. 9745 (1870); *Ramsay, P. Linn. Soc. N.S.W.* i. p. 185 (1876) [N. S. Wales and Queensland], ii. p. 196 (1877); *id. Tab. List Austr. B.* p. 18 (1888) [N. and N.E. Australia, Interior, and S. New Guinea].
Turnix beccarii, *Salvad. Ann. Mus. Civ. Genov.* vii. p. 675 (1875) [S.E. Celebes]; *id. Ibis*, 1890, p. 130; *Grant, Ibis*, 1890, p. 344.
Turnix melanota, *Forbes, P. Z. S.* 1878, p. 127 [Albany I. and Booby I., Cape York]; *id. Voy. 'Challenger,' B.* p. 91 (1881).
Turnix melanonota, *Salvad. Ann. Mus. Civ. Genov.* xviii. p. 9 (1882) [part.]; *id. Orn. Pap.* iii. p. 258 (1882) [part.]; *id. Agg. Orn. Pap.* pt. iii. p. 195 (1891).
Turnix maculosa, *Grant, Ibis*, 1889, pp. 451, 452, 468.

Adult female. Resembles *T. blanfordi*, from which it can at once be distinguished by its smaller size and by having the scapulars edged with golden buff or straw-colour. The feathers of the top of the head are black margined with brownish grey, a dull buff line runs down the middle of the head, and there is more rufous remaining in the plumage of the upper parts below the nuchal collar. Total length 5·8 inches, wing 3·2, tail 1·3, tarsus 0·85.

Adult male. Resembles the female, but there is no trace of a rufous nuchal collar. Total length 5·1 inches, wing 2·8, tail 1·2, tarsus 0·8.

Immature birds of both sexes resemble the immature of *T. blanfordi*, but are at once distinguished by the wider golden-buff margins of the scapulars.

Hab. N. and E. Australia and the Interior; also S. coast of N. Guinea; S.E. Celebes.

a. ♂ ad. sk.	Lizard Island, May.	J. B. Jukes, Esq. [P.].
b. ♂ imm. sk.	Albany Island, Cape York.	'Challenger' Exp.
c–g. ♂ ♀ ad. et imm. sk.	Somerset, Cape York (*J. F. Cockerell & J. Thorpe*).	Salvin-Godman Coll.

h, i. ♂ ♀ ad. sk.	Somerset, Cape York (*J. F. Cockerell & J. Thorpe*).	Tweeddale and Gould Colls.
k. ♀ imm. sk.	Booby Island.	'Challenger' Exp.
l, m. ♂ ♀ imm. sk.	New South Wales.	Gould Coll.

13. Turnix saturata.

Turnix melanotus, *Layard, Ibis*, 1880, p. 302 [Mioko I., Duke of York Group]; *Finsch, Vög. Südsee*, p. 20 (1884).
Turnix sp., *Finsch, Ibis*, 1881, p. 539 [New Britain].
Turnix melanonota, *Salvad. Ann. Mus. Civ. Genov.* xviii. p. 9 (1882) [part.]; *id. Orn. Pap.* iii. p. 258 (1882) [part.].
Turnix saturata, *Forbes, Ibis*, 1882, p. 428, pl. xii.; *Salvad. Ann. Mus. Civ. Genov.* xviii. p. 430 (1882); *id. Orn. Pap.* iii. p. 564 (1882); *Grant, Ibis*, 1889, pp. 452, 469; *Salvad. Agg. Orn. Pap.* pt. iii. p. 195 (1891).

Adult female. Differs from *T. maculosa* in having no rufous nuchal collar, the whole of the upper parts being blackish grey with traces here and there towards the ends of the feathers of vermiculations of pale rufous and buff; the scapulars widely edged with golden buff; and the sides of the face, superciliaries, throat, and chest bright rufous. Total length 5·5 inches, wing 3·3, tail 1·2, tarsus 0·8.

Adult male. Differs from the female only in having the chin and middle of the throat white. Total length 5 inches, wing 2·9, tail 1, tarsus 0·8.

A *nestling* has the plumage blackish, edged on the upper parts with rufous; the chest, wings, and upper back irregularly spotted with white.

Hab. New Britain and Duke of York Group.

a. ♂ ad. sk.	New Britain, Aug. (*J. Kleinschmidt*).	Tweeddale Coll.
b–d. ♂ ♀ ad. et pull. sk.	New Britain, June, July.	J. Kleinschmidt [C.].
e. ♀ ad. sk.	Blanche Bay, New Britain.	C. L. Layard, Esq. [P.].

14. Turnix rufescens.

Turnix rufescens, *Wallace, P. Z. S.* 1863, p. 497 [Semao I., Timor]; *Forbes, Ibis*, 1882, p. 430; *Grant, Ibis*, 1889, pp. 451, 452, 468.

The only representative of this species is the type specimen. It is not sexed, but appears to be a nearly adult male. It resembles *T. maculosa* in the lighter colour of the back and *T. saturata* in the colour of the under surface. It is impossible, without more specimens and adult females, to say whether it really represents a distinct species or not. Total length 5·2 inches, wing 2·9, tail 1·1, tarsus 0·8.

Hab. Island of Semao, Timor.

a. ? ♂ nr. ad. sk.	I. of Semao, Timor.	A. R. Wallace, Esq. [C.]. (Type of the species.)

15. Turnix ocellata.

Caille de l'Isle de Luçon, *Sonnerat, N. Guinée*, p. 54, pl. 23 (1776).
Oriolus ocellatus, *Scopoli, Del. Flor. Faun. Insubr.* pt. ii. p. 88 (1786).
Tetrao luzoniensis, *Gm. S. N.* i. pt. ii. p. 767 (1788).
Perdix luzoniensis, *Lath. Ind. Orn.* ii. p. 656 (1790).
Hemipodius thoracicus, *Temm. Pig. et Gall.* iii. pp. 622, 755 (1815).
Turnix rufus, *Vieillot*, *2nd ed. Nouv. Dict. d'Hist. Nat.* xxxv. p. 48 (1823).
Ortygis ocellata, *Meyer*, *Nov. Act. Acad. C. L.-C. Nat. Curios.* xvi. *Suppl. Primum*, p. 101, pl. 17 (1834) [Peru !].
Turnix ocellatus, *Gray*, *Gen. B.* iii. p. 511 (1847).
Hemipodius ocellatus, *v. Martens*, *J. f. O.* 1866, p. 26.
Turnix ocellata, *Gray*, *Hand-l. B.* ii. p. 271, no. 9750 (1870); ? *Walden*, *Ibis*, 1872, p. 107; *id. Tr. Z. S.* ix. pp. 224, 251 (1875); *Tweedd. P. Z. S.* 1877, p. 700; *Ramsay*, *Orn. Works Tweedd.*, App. p. 659 (1881); *Grant*, *Ibis*, 1889, pp. 452, 469.

Adult female. General colour above ashy brown; top of the head black, each feather margined with rufous brown; a white band down the middle of the head and over each of the eyes; sides of the head and throat black, irregularly spotted with white, almost uniform black in very old specimens; a fairly well-developed rufous nuchal collar; rest of the upper parts with irregular, narrow, wavy bars and vermiculations of black; some of the feathers of the upper back and scapulars with subterminal black blotches edged or mixed with rufous. Primaries, secondaries, and primary-coverts blackish brown, edged on the outer web with pale buff; secondary-coverts brownish buff; rest of the wing-coverts the same, but with a subterminal black spot on the outer web of most of the feathers, edged externally with whitish buff. Neck, chest, and breast uniform rufous chestnut; rest of the underparts dirty buff, paler on the belly. Iris pale yellow or white; bill and legs light greenish yellow; nails grey. Total length 6·9 inches, wing 4·2, tail 1·8, tarsus 1·2.

The nearly adult female differs from the above in having the black subterminal blotches on the feathers of the upper back and scapulars margined laterally with pale buff, the greater part of the chin and throat white, and the whole of the markings on the upper parts more distinct.

Adult male. Differs from the nearly adult female in having the chin and middle of the throat white (spotted with black in younger examples); many of the feathers of the chest with a subterminal black dot, which is absent in the most adult; no rufous nuchal collar; and the ocelli on the wing-coverts larger and more numerous. Iris yellowish white; bill greenish; legs greenish yellow; nails grey. Total length 6·4 inches, wing 3·8, tail 1·6, tarsus 1·1.

Hab. Luzon, Philippine Islands.

a, b. ♀ ad. et nr. ad. sk.	Philippine Islands.	H. Cuming, Esq. [C.].
c–f. ♂ ♀ ad. et nr. ad. sk.	Monte Albau, Luzon, Feb., March (*A. H. Everett*).	Tweeddale Coll.
g. ♂ nr. ad. sk.	Manilla, Aug. (*Maitland-Heriot*).	Tweeddale Coll.

h. ♂ ad. sk.	Laguna de Bai, Nov. (*A. H. Everett*).	Tweeddale Coll.
i. ♀ ad. sk.	S. Luzon.	Gould Coll.

16. Turnix nigricollis.

La Caille de Madagascar (Coturnix madagascariensis), *Brisson, Orn.* i. p. 252, pl. xxiv. fig. 2 (1760); *D'Aubent. Pl. Enl.* ii. no. 171 (1783).

Black-necked Quail, *Lath. Gen. Syn.* ii. pt. ii. p. 791 (1783); *id. Gen. Hist.* viii. p. 339 (1823).

Tetrao nigricollis, *Gm. S. N.* i. pt. ii. p. 767 (1788).

Perdix nigricollis, *Lath. Ind. Orn.* ii. p. 656 (1790); *Temm. Tabl. Méth.* p. 64 (1838).

Hemipodius nigricollis, *Temm. Pig. et Gall.* iii. p. 619 (1815).

Ortygis nigricollis, *Cuv. Règne Anim.* i. p. 453 (1817).

Turnix nigricollis, *Vieillot, N. Dict. d'Hist. Nat.* xxxv. p. 45 (1819); *Gray, Gen. B.* iii. p. 511 (1847); *Hartlaub, Ann. Mag. N. H.* ii. p. 391 (1848); *id. J. f. O.* 1860, p. 164; *Roch & Newton, Ibis*, 1863, p. 168; *Pollen, Ned. Tijd. Dierk.* i. p. 317 (1863); *Newton, P. Z. S.* 1865, p. 836; *Schlegel, P. Z. S.* 1866, p. 425; *Grandidier, Rev. Mag. Zool.* 1867, p. 419; *Schleg. in Pollen et Van Dam, Rech. Faun. Madag.* ii. p. 120 (1868); *Gray, Hand-l. B.* ii. p. 270, no. 9733 (1870); *Bartlett, P. Z. S.* 1875, p. 67; *Hartl. Vög. Madag.* p. 284 (1877); *Pollen, Faun. Madag.* i. p. 206, fig. (1877); *Milne-Edwards & Grandidier, Madagascar, Ois.* p. 494, pl. ccii. (1885); *Grant, Ibis*, 1889, pp. 452, 471; *Sibree, Ibis*, 1891, p. 565; *Grant, Ibis*, 1892, p. 346; *Lilford, Ibis*, 1892, p. 466.

Adult female. Feathers of the lores and forehead black barred with white, those on the sides of the face and neck white tipped with black; a white stripe from the base of the lower mandible runs down either side of the throat, which, together with the chin and middle of chest, is deep black; top of the head brown, dotted with white; nape dark grey; upper back and scapulars black, barred with rufous and margined on either side with whitish or buff; lower back, rump, and upper tail-coverts brownish grey, mixed here and there with rufous, and with wavy black bars and vermiculations, some of the feathers with one or a pair of buff spots near the extremity of the margin. Primaries, primary-coverts, and secondaries blackish brown, the quills margined on the outer web with buff; tertiaries and rest of the wing-coverts rufous, vermiculated with black, and ornamented with irregularly-shaped black and white spots situated mostly on the outer web. Chest, breast, and underparts dove-grey, paler on the belly; sides of chest and shoulders rust-red. Iris bright yellow; bill bluish; legs flesh-colour. Total length 5·8 inches, wing 3·3, tail 1·4, tarsus 0·8.

Adult male. Differs from the above in having the feathers of the forehead black widely edged with buff; the nape like the upper back; the chin and middle of throat white; the sides of the chest washed with pale rufous; the middle of the chest, breast and flanks buff, all barred with black; belly paler. Total length 5·5 inches, wing 2·9, tail 1·35, tarsus 0·8.

Quite young birds and *nestlings* have the outer webs of the

whole of the secondaries rufous, vermiculated with black and ornamented along the margin with three or four white spots edged with black; otherwise the plumage is much the same as in the immature male.

Hab. Madagascar.

a, b. ♀ ad. sk.	Madagascar.	Gould and Shelley Colls.
c. ♀ ad. st.	Madagascar.	Capt. Sir E. Belcher, R.N. [P.].
d, e. ♀ ad. et ♂ juv. sk.	Antankarana, N.W. Madagascar (*Pollen & Van Dam*).	Gould Coll.
f. ♀ ad. sk.	Mahambo, E. Madagascar.	Purchased.
g–l. ♂ ♀ ad. et juv. sk.	Ankafina, Betsileo, March (*W. D. Cowan*).	Tweeddale Coll.
m. ♀ ad. sk.	Analatsoy (*W. D. Cowan*).	Shelley Coll.
n, o. ♂ ♀ ad. sk.	Died in confinement.	W. R. Ogilvie-Grant, Esq. [P.].

17. Turnix melanogaster.

Hemipodius melanogaster, *Gould, P. Z. S.* 1837, p. 7 [N. S. Wales and Tasmania!]; *id. Syn. B. Austr.* text & pl. fig. 2 (1837–8); *id. Birds of Austr.* v. pl. 81 (1848).

Turnix melanogaster, *Gould, Handb. B. Austr.* ii. p. 178 (1865); *Gray, Hand-l. B.* ii. p. 270, no. 9742 (1870); *Ramsay, P. Linn. Soc. N. S. W.* i. p. 184 (1876), ii. p. 196 (1877); *id. Tab. List Austr. Birds,* p. 18 (1888) [Wide Bay district to N. S. Wales]; *Grant, Ibis,* 1889, pp. 452, 472; *North, N. & E. B. Austr.* p. 285 (1889).

Adult female. General colour above umber-brown. Forehead, sides of the face, chin and throat black; top of the head a mixture of dark chestnut and black; superciliary stripes and nape black, spotted with white; most of the feathers of the upper back and the scapulars and some of the rump-feathers and upper tail-coverts with a broad chestnut patch at the extremity barred with black, and edged laterally with white in the two former and whitish buff in the latter. Primaries, inner secondaries, and primary-coverts blackish brown, margined with buff on the outer web; outer secondaries and secondary-coverts paler, finely mottled with buff and black on the outer web; rest of the wing-coverts chestnut, edged with brown, and each with two or three irregularly-shaped white ocelli edged with black. Chest and breast black, most of the feathers widely tipped with white, and some of those on the sides of the breast with a patch of bright chestnut near the extremity. Belly and rest of underparts dark grey, marbled with buff and black. Tail umber-brown, with wavy transverse bars of black and lateral buff spots. Total length 7·5 inches, wing 4·4, tail 1·7, tarsus 1.

Adult male. Differs from the female in having the top of the head umber-brown like the back, the lores and sides of the head white tipped with black, the chin and rest of the throat pure white, the chest and breast whitish buff, irregularly barred and marked with black, and the rest of the underparts whiter. Total length 6·3 inches, wing 4·1, tail 1·6, tarsus 0·95.

Hab. E. Australia.

a, b. ♂ ad. sk.	Australia.	Tweeddale Coll.
c–e. ♂ ♀ ad. sk.	Queensland.	Salvin-Godman Coll.
f, g. ♂ ♀ ad. sk.	Queensland?	Gould Coll.
h, i. ♂ ♀ ad. st.	Moreton Bay.	Purchased.

18. Turnix varia.

Perdix varius, *Lath. Ind. Orn. Suppl.* p. lxiii (1801).
New Holland Partridge, *Lath. Gen. Syn. Suppl.* ii. p. 283 (1802).
Varied Quail, *Lath. Gen. Hist.* viii. p. 344 (1823).
Hemipodius varius, *Gould, Syn. B. Austr.* text & pl. fig. 1 (1837–8); *id. Birds of Austr.* v. pl. 82 (1848).
Hemipodius scintillans, *Gould, P. Z. S.* 1845, p. 62 [Houtman's Abrolhos, W. Australia]; *id. B. of Austr.* v. pl. 83 (1848).
Turnix varius, *Gould, Handb. B. Austr.* ii. p. 179 (1865); *Ramsay, P. Z. S.* 1876, p. 119; *id. P. Linn. Soc. N. S. W.* i. pp. 185, 218 (1876), ii. p. 196 (1877); *id. Tab. List Austr. B.* p. 18 (1888) [Rockingham Bay to S. Australia and Tasmania]; *North, N. & E. B. Austr.* p. 285 (1889).
Turnix scintillans, *Gould, Handb. B. Austr.* ii. p. 181 (1865); *Gray, Hand-l. B.* ii. p. 270, no. 9744 (1870); *Ramsay, P. Linn. Soc. N. S. W.* i. p. 184 (1876), ii. p. 196 (1877); *id. Tab. List Austr. B.* p. 18 (1888) [N.W. and N. Australia].
Turnix varia, *Ramsay, Ibis*, 1866, p. 334; *Gray, Hand-l. B.* ii. p. 270, no. 9743 (1870); *Marie, Ibis*, 1877, p. 362 [New Caledonia]; *Layard, Ibis*, 1878, p. 262, 1882, p. 530; *Grant, Ibis*, 1889, pp. 452, 453, 473.

Adult female. General colour above black, barred with rufous, shading into chestnut on the nuchal region. Centre of the top of the head dark grey; sides black, edged with grey or rufous; lores, superciliary stripes, sides of the face, and throat white tipped with black; chin and centre of throat white. Nape grey, with a black and white spot at the extremity of the feathers; nuchal region bright chestnut edged with grey, and dotted here and there with black and white marks. Back, scapulars, rump, and upper tail-coverts grey at the base and margined with black, barred with chestnut and rufous at the extremity, and with a submarginal white streak on either side. Primaries, secondaries, and primary-coverts blackish grey, the former margined with white on the outer web; secondary-coverts buff-grey, dotted indistinctly with black; rest of the wing-coverts grey at the base and rufous at the extremity, each with two or three irregular white ocelli edged with black. Chest grey, each feather with a pale buff or whitish shaft-streak widening out towards the extremity; breast buff mixed with grey, some of the feathers on the sides chestnut, with whitish black-edged spots at the extremity. Belly and rest of underparts pale buff. Tail like the upper tail-coverts. Total length 7·6 inches, wing 4·2, tail 1·9, tarsus 0·9.

Adult male. Resembles the female, but there is no well-defined rufous nuchal collar, and on the chest the pale buff element predominates over the grey. Total length 6·4 inches, wing 3·7, tail 1·7, tarsus 0·8,

Hab. Australia; ? New Caledonia.

a–d. ♀ ad. et imm. sk.	Somerset, Cape York (*J. F. Cockerell & J. Thorpe*).	Tweeddale and Salvin Colls.
e. ♂ ad. sk.	New South Wales.	Gould Coll.
f. ♀ ad. sk.	Belmore, N. S. W.	Lord Leigh [P.].
g. ♂ ad. sk.	Yarrundi, Hunter River, Nov.	Gould Coll.
h–j. ♂ ♀ ad. sk.	S. Australia.	Sir G. Grey [P.].
k. ♀ ad. sk.	S. Australia.	Gould Coll.
l. ♀ ad. sk.	Melbourne.	Tweeddale Coll.
m. Pull. st.	Murray River, Jan.	Gould Coll.
n. ♀ ad. sk.	Perth, W. Australia, April.	Eyton Coll.
o, p. ♂ ad. sk.	Australia.	Tweeddale Coll. and Sir D. Cooper [P.].
q. Imm. st.	Australia.	Gould Coll.
r. ♀ ad. sk.	[Australia.]	Tweeddale Coll.
s. Pull. st.	Hobart Town, Tasmania, Dec.	
t. ♂ ad. sk.	New Caledonia*.	Tweeddale Coll.

19. Turnix castanonota.

Hemipodius castanotus, *Gould, P. Z. S.* 1839, p. 145[N.W. Australia]; *id. Birds of Austr.* v. pl. 85 (1848).
Turnix castanotus, *Gould, Handb. B. Austr.* ii. p. 183 (1865); *Ramsay, Tab. List Austr. B.* p. 18 (1888) [N. Australia].
Turnix castanota, *Gray, Hand-l. B.* ii. p. 270, no. 9746 (1870).
Turnix castanonota, *Grant, Ibis*, 1889, pp. 453, 474.

Adult female. General colour vinaceous red; a dark grey band down the middle of the head; sides of the head like the upper parts of the body. Lores, superciliary stripes, and sides of the face white tipped with black; nape spotted with white; most of the feathers of the upper back and scapulars edged laterally with black and white bands and some of them blotched with blackish towards the extremity; lower back, rump, upper tail-coverts, and tail vinaceous red. Primaries, secondaries, and primary-coverts brownish, the outer primaries margined with whitish; rest of the wing-coverts light red, ornamented with one or more rounded black and white ocelli. Chin and throat white, with pure white shafts; middle of chest and breast greyish buff, some of the feathers with whitish shaft-stripes; sides light red, with irregularly-shaped white black-edged ocelli; rest of the underparts whitish buff. Bill very strong. Total length 6 inches, wing 3·6, tail 1·5, tarsus 0·9.

Adult male. Resembles the female, but is somewhat smaller.

Hab. N. Australia.

a. ♀ nr. ad. sk.	Port Essington, N. Australia.	J. B. Jukes, Esq. [P.].
b. ♀ ad. sk.	Port Essington, N. Australia.	Capt. Chambers, R.N. [P.].
c, ♂ ad. sk.	Adelaide River, Oct.	P. W. Bassett Smith, Esq. [P.].

* *T. varia* is said to have been introduced from Australia, but this specimen probably represents a distinct, though closely allied species. It differs in having most of the feathers of the rump, as well as those of the upper surface, almost entirely black, margined with whitish or buff. It is also a smaller bird than the male of *T. varia*, its wing being 3·3 inches instead of 3·6–3·7. In the index to the 'Ibis' for 1889 this specimen is named *Turnix novæ caledoniæ*.

20. Turnix pyrrhothorax.

Hemipodius pyrrhothorax, *Gould, P. Z. S.* 1840, p. 150; *id. Birds of Austr.* v. pl. 86 (1848).

Turnix pyrrhothorax, *Gould, Handb. B. Austr.* ii. p. 186 (1865); *Gray, Hand-l. B.* ii. p. 270, no. 9747 (1870); *Ramsay, P. Z. S.* 1876, p. 119; *id. Tab. List Austr. B.* p. 19 (1888) [E. and S. Australia and the Interior]; *Grant, Ibis*, 1889, pp. 453, 474; *North, N. & E. B. Austr.* p. 287 (1889).

Adult female. General colour above stone-grey, mixed here and there with rufous and buff. Feathers of the top of the head black, with rufous margins; a whitish-buff stripe down the centre of the head; nape and nuchal region rufous grey, each feather faintly barred with darker and edged laterally with whitish buff. Back, scapulars, rump, upper tail-coverts, and tail irregularly barred and vermiculated with rufous buff and black and margined laterally with whitish or buff. Primaries and secondaries and their coverts as in *T. varia*; rest of the wing-coverts marbled with black, buff, and dull red, and somewhat widely margined with pale buff. Superciliary stripes, lores, sides of the face, and neck white tipped with black. Chin, throat, chest, sides of breast, flanks, and under tail-coverts rusty buff; the middle of the chin and throat and the remainder of the underparts whitish; some of the feathers on the sides of the chest and breast are irregularly barred with black and white at their extremity. Bill very strong. Total length 6 inches, wing 3·3, tail 1·4, tarsus 0·8.

Adult male. Resembles the female, but is smaller, and the rust-coloured chest is not so bright. Total length 5·2 inches, wing 2·9, tail 1·3, tarsus 0·75.

Hab. N.E., E., and S. Australia; also the Interior.

a. ♀ ad. st.	Australia.	Purchased.
b. ♂ ad. sk.	Australia.	Gould Coll.
c. ♂ ad. sk.	Australia.	Sir D. Cooper.
d, e. ♂ ♀ ad. sk.	Somerset, Cape York (*J. Cockerell & J. Thorpe*).	Salvin-Godman and Tweeddale Colls.
f–l. ♂ ♀ ad. sk.	Queensland (*J. Cockerell & J. Thorpe*).	Salvin-Godman and Gould Colls.
m. ♀ ad. sk.	Boorloo Spring, S. of Lake Eyre, Jan.	Tweeddale Coll.

21. Turnix velox.

Hemipodius velox, *Gould, P. Z. S.* 1840, p. 150 [Interior of N.S. Wales]; *id. B. of Austr.* v. pl. 87 (1848).

Turnix velox, *Gould, Handb. B. Austr.* ii. p. 184 (1865); *Gray, Hand-l. B.* ii. p. 270, no. 9748 (1870); *Ramsay, P. Z. S.* 1876, p. 119; *id. Tab. List Austr. B.* p. 18 (1888) [Australia generally]; *Grant, Ibis*, 1889, pp. 453, 475; *North, N. & E. B. Austr.* p. 286 (1889).

Adult female. Has the general colour above reddish chestnut, shading into light red on the nape and the top of the head; otherwise the markings on the upper surface are almost the same as in

T. pyrrhothorax except that in the most mature specimens the top of the head and nape are uniform light red, the former without (or with only a few) black feathers and the latter without the white lateral margins. The sides of the head and chest are dull rufous, and the chin, throat, breast, and rest of underparts white. Bill very strong. Total length 5·5 inches, wing 3·3, tail 1·2, tarsus 0·7.

Adult male. Resembles the female. Total length 5·5 inches, wing 2·9, tail 1·2, tarsus 0·6.

Immature specimens have the outer webs of the primaries mottled with rufous, those of the secondaries edged and toothed with white, and the markings on the upper parts less regular than in the adult.

Hab. Australia.

a. ♀ ad. sk.	S. Queensland.	Tweeddale Coll.
b–c. ♂ ad. et ♀ imm. sk.	N. S. Wales.	Salvin-Godman Coll.
d. ♀ ad. sk.	Yarrundi, Hunter R. (*J. Gould*).	Eyton Coll.
e, f. ♀ ad. st.	Yarrundi, Hunter R.	Gould Coll.
g, h. ♀ ad. et juv. sk.	S. Australia.	Sir G. Grey, [P.].
i, k. ♂ ad. et ♀ imm. sk.	Mt. Gambier, S. Australia.	Gould Coll.
l. Imm. st.	Mokai, Australia.	Gould Coll.

2. PEDIONOMUS.

	Type.
Pedionomus, *Gould, P. Z. S.* 1840, p. 114.....	P. torquatus.
Turnicigralla, *Des Murs, Rev. Zool.* 1845, p. 276.....	P. torquatus.

Hallux present.

Range. Australia: N. S. Wales, Victoria, S. Australia, and the Interior.

1. Pedionomus torquatus.

Pedionomus torquatus, *Gould, P. Z. S.* 1840, p. 114 [Interior of S. Australia]; *id. B. Austr.* v. pl. 80 (1848); *id. Handb. B. Austr.* ii. p. 187 (1865); *Diggles, B. Austr.* ii. pt. xv. pl. 195 (1867); *Legge, P. Z. S.* 1869, p. 236; *Gray, Hand-l. B.* ii. p. 271, no. 9753 (1870); *Ramsay, Tab. List Austr. B.* p. 19 (1888); *North, N. & E. B. Austr.* p. 288 (1889): *Gadow, Rec. Austr. Mus.* i. p. 205 (1891).

Pedionomus microurus, *Gould, P. Z. S.* 1842, p. 20 [Interior of S. Australia].

Turnix gouldiana (*Des Murs*), *Bonap. Compt. Rend.* xlii. p. 881 (1856).

Adult female. General colour above brown, finely barred with black; a black and white collar surrounds the neck, each feather black with a white patch at the extremity of either web; nape and upper part of the chest rust-colour. Most of the feathers of the top of the head, back, and scapulars are margined with whitish buff and have the

vanes free, giving the upper plumage a very Rhea-like aspect. Primaries, secondaries, and primary-coverts blackish brown, the outer primaries margined and vermiculated on the outer web with buff, the inner primaries and the secondaries with whitish-buff ends and bases shading into the dark middle part, and the primary-coverts tipped with buff; rest of the wing-coverts buff, with wavy bars of black. Chin and centre of throat white; sides of face and throat whitish, spotted with black; lower chest and rest of underparts whitish buff; most of the feathers on the breast and sides of the belly with one or two subterminal black bars. Total length 6·3 inches, wing 4, tail 1·6, tarsus 1.

Adult male. Differs from the female in having no rust-colour on the nape; the collar round the neck is *buff* and brownish, not nearly so clearly differentiated from the rest of the plumage, and the upper chest is washed with bright buff. Total length 5·8 inches, wing 3·4, tail 1·2, tarsus 0·9.

Hab. Same as that of the genus.

a–d. ♂ ♀ ad. sk.	Australia (*J. T. Cockerell*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Australia.	Sir D. Cooper [P.].
f. ♂ ad. sk.	Queensland.	Salvin-Godman Coll.
g–m. ♂ ♀ ad. sk. et st.	S. Australia.	Sir G. Grey [P.].
n. ♀ imm. sk.	S. Australia.	Lord Leigh [P.].
o, p. ♀ ad. sk.	Adelaide.	Adelaide Museum.
q. ♂ ad. sk.	Victoria.	E. B. Tichener, Esq. [P.].
r. ♂ ad. sk.		Gould Coll.

ADDENDA.

Page 12. **Pteroclurus exustus.**

3rd line from bottom of synonymy, for *Pteroles* read *Pterocles*.

Add :— Page 14. **Pteroclurus senegallus.**

Pteroclurus senegallus, *Sharpe, Bull. Brit. Orn. C.* no. xi. p. v (1893) [S.W. of Suakin].

e'.	Ad. sk.	40 miles S.W. of Suakin.	Capt. R. H. Penton [P.].

Add :— Page 25. **Pterocles gutturalis.**

Pterocles gutturalis, *Shelley, Ibis*, 1894, p. 24 [near Lake Mweru].

To specimens *a*, *b*, *for* Purchased *read* :—

Sir A. Smith [C.].
(Types of the species.)

Also add :—

v, *w*.	Imm. sk.	Chisela R. Plains, Lake Mweru, Aug., Oct.	Consul H. H. Johnston [P.].

Add :— Page 29. **Pterocles lichtensteini.**

Pterocles lichtensteini, *Sharpe, Bull. Brit. Orn. C.* no. xi. p. v (1893) [S.W. of Suakin].

b', *c'*.	♂ ♀ ad. sk.	40 miles S.W. of Suakin.	Capt. R. H. Penton [P.]

Add :— Page 35. **Lagopus scoticus.**

e^3, f^3.	♂ ♀ ad. sk.	Loch Carron, Ross-shire, April.	C. J. Murray, Esq. [P.].
g^3.	♀ ad. sk.	Cromarty Point, Aug.	G. St. Quintin, Esq. [P.].
h^3–m^3.	♂ ♀ ad. sk.	Dunphail, Morayshire, March, April, Sept.	Lord Thurlow [P.].
n^3, o^3.	♂ ♀ ad. sk.	Glenferness, Morayshire, Aug.	Earl of Leven & Melville [P.].
p^3, q^3.	♂ ♀ ad. sk.	Ben Avon, Banffshire, June.	F. D. Godman, Esq. [P.].
r^3–a^4.	♂ ♀ ad. et juv. sk.	Cromlix, Dunblane, March, April, July, Oct., Nov.	Capt. Hon. A. Drummond [P.].
b^4.	♂ ad. sk.	Slogarie, Kirkcudbright, Feb.	Robert Service, Esq. [P.].

Add :— Page 40. **Lagopus lagopus.**

Lagopus lagopus, *Bendire, N. Am. B.* p. 69, pl. ii. figs. 5–10 (1892).

Add :— Page 44. Subsp. *a.* **Lagopus alleni.**

Lagopus lagopus alleni, *Bendire, N. Am. B.* p. 75 (1892).

Add :— Page 44. **Lagopus mutus.**

c^2–g^2. ♂ ♀ ad. et imm. sk.	Ben Avon, Banffshire, June.	F. D. Godman, Esq. [P.].

Add :— Page 48. **Lagopus rupestris.**

Lagopus rupestris, *Belding, Occas. Pap. Cal. Acad. Sci.* ii. p. 18 (1890); *Bendire, N. Am. B.* p. 75, pl. ii. figs. 11–15 (1892).
Lagopus rupestris reinhardti, p. 78,
Lagopus rupestris nelsoni, p. 80,
Lagopus rupestris atkhensis,* p. 81,
Lagopus welchi, p. 82,
} *Bendire, N. Am. B.* (1892).

y'. ♂ imm. sk.	Beechey I., N. America, Dec.	McCormick Bequest.
z'. ♀ ad. sk.	Feilden Peninsula *, Grinnell Land, May.	Col. Feilden [P.].

Add :— Page 52. **Lagopus leucurus.**

Lagopus leucurus, *Belding, Occas. Pap. Cal. Acad. Sci.* ii. p. 18 (1890); *Bendire, N. Am. B.* p. 83, pl. ii. figs. 16 & 17 (1892).

Add :— Page 69. **Canachites canadensis.**

Dendragapus canadensis, *Bendire, N. Am. B.* p. 51, pl. i. figs. 20–23 (1892).

Add :— Page 71. **Canachites franklini.**

Dendragapus franklinii, *Belding, Occas. Pap. Cal. Acad. Sci.* ii. p. 17 (1890); *Bendire, N. Amer. B.* p. 56 (1892).

Add :— Page 74. **Dendragapus obscurus.**

Dendragapus obscurus, *Bendire, N. Am. B.* p. 41 (1892).

Add :— Page 75. Subsp. *a.* **Dendragapus fuliginosus.**

Dendragapus obscurus fuliginosus, *Belding, Occas. Pap. Cal. Acad. Sci.* ii. p. 15 (1890); *Bendire, N. Am. B.* p. 43, pl. i. figs. 16–19 (1892).

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* "The most northern bird procured by man" [MS. note of H. W. Feilden, 1876].

Add :— Page 76. **Dendragapus richardsoni.**

Dendragapus obscurus richardsoni, *Belding, Occas. Pap. Cal. Acad. Sci.* ii. p. 16 (1890); *Bendire, N. Am. B.* p. 50 (1892).

Add :— Page 77. **Tympanuchus cupido.**

Tympanuchus cupido, *Bendire, N. Am. B.* p. 93, pl. iii. fig. 2 (1892).

Add :— Page 78. **Tympanuchus americanus.**

Tympanuchus americanus, *Bendire, N. Am. B.* p. 88, pl. ii. figs. 18–20 (1892).

Add :— Page 80. **Tympanuchus pallidicinctus.**

Tympanuchus pallidicinctus, *Bendire, N. Am. B.* p. 96, pl. iii. fig. 1 (1892).

Add :— Page 81. **Centrocercus urophasianus.**

Centrocercus urophasianus, *Belding, Occas. Pap. Cal. Acad. Sci.* ii. p. 19 (1890); *Bendire, N. Am. B.* p. 106, pl. iii. figs. 11–13 (1892).

Add :— Page 82. **Pediocætes phasianellus.**

Pediocætes phasianellus, *Bendire, N. Am. B.* p. 97, pl. iii. figs. 3–5 (1892).

Add :— Page 83. Subsp. *a*. **Pediocætes columbianus.**

Pediocætes phasianellus columbianus, *Belding, Occas. Pap. Cal. Acad. Sci.* ii. p. 18 (1890); *Bendire, N. Am. B.* p. 98, pl. iii. figs. 6–8 (1892).

Pediocætes phasianellus campestris, *Bendire, N. Am. B.* p. 101, pl. iii. figs. 9 & 10 (1892).

Add :— Page 85. **Bonasa umbellus.**

Bonasa umbellus, *Bendire, N. Am. B.* p. 59, pl. ii. fig. 1 (1892).

Bonasa umbellus togata, *Bendire, N. Am. B.* p. 64, pl. ii. fig. 2 (1892).

Bonasa umbellus umbelloides, *Belding, Occas. Pap. Cal. Acad. Sci.* ii. p. 17 (1890); *Bendire, N. Am. B.* p. 67, pl. ii. fig. 3 (1892).

Bonasa umbellus sabini, *Belding, Occas. Pap. Cal. Acad. Sci.* ii. p. 17 (1890); *Bendire, N. Am. B.* p. 68, pl. ii. fig. 4 (1892).

Add :— Page 100. **LERWA.**

	Type.
Tetraeoperdix, *Heine, Nomencl. Mus. Hein.* p. 294 (1887)..	L. lerwa.

Add :— Page 106. **Tetraogallus himalayensis.**

Specimen *a*. (Type of the species.)

Add :— Page 111. **Caccabis saxatilis.**

Perdix saxatilis, *Gigl. Av. Ital.* pl. 252 (1881); *Altum, J. f. O.* 1891, p. 93.

Add :— Page 113. Subsp. *a*. **Caccabis chukar.**

Specimen *g'*. (Type of the subspecies.)

Add :— Page 118. **Caccabis rufa.**

t. ♂ ad. sk.	Wells, Norfolk, Nov. (*Dr. R. B. Sharpe*).	Earl of Leicester [P.].

Add :— Page 125. **Ammoperdix heyi.**

Ammoperdix heyi, *Sharpe, Bull. Brit. Orn. C.* no. xi. p. v (1893) [40 miles S.W. of Suakin].

q, r. ♂ ♀ ad. sk.	S.W. of Suakin.	Capt. R. H. Penton [P.].

Add :— Page 164. **Francolinus sharpii.**

Specimens *b* and *c*. (Types of the species.)

Page 169. Add :—

36 *a*. **Francolinus johnstoni.**

Francolinus johnstoni, *Shelley, Ibis*, 1894, p. 24.

Adult male. Very similar to the male of *F. hildebrandti*, but differs in having the general shade of the upper parts darker and less rufous, and the feathers of the underparts with uninterrupted black shaft-stripes, instead of heart-shaped subterminnal black marks. Legs apparently bright orange.

Adult female. Similar to that of *F. hildebrandti*, but decidedly duller and darker.

Hab. Nyassa-land.

a. ♂ ad. sk.	Zomba, Oct. (*A. Whyte*).	Consul H. H. Johnston [P.]. (Types of the species.)
b. ♀ ad. sk.	Milanje Hills, Sept. (*A. Whyte*).	

Add :— Page 172. **Francolinus erckeli.**

Francolinus erkelii, *Sharpe, Bull. Brit. Orn. C.* no. xi. p. iv (1893) [40 miles S.W. of Suakin].

Add :— Page 176. **Pternistes humboldti.**

Pternistes humboldti, *Shelley, Ibis*, 1894, p. 24 [Upper Shiré River].

e. ♂ ad. sk. Zomba, Jan. (*A. Whyte*). Consul H. H. Johnston [P.].

Add :— Page 179. **Pternistes swainsoni.**

Specimen *e*. Sir A. Smith [C.]. (Type of the species.)

Page 181. **Pternistes leucoscepus.**

Line 4 of synonymy, for *Pternistes* read *Pternistis*.

I have recently been informed by Count Salvadori that specimens from Shoa and Somali-land are apparently intermediate between this species and *P. infuscatus*, and seem to agree best with the latter; so probably references to these localities should be referred to the synonymy of *P. infuscatus*.

Add :— Page 185. **Perdix perdix.**

Partridge, *Selby, Brit. Orn.* i. pt. ii. pl. 61 (1833).
Starna perdix, *Gigl. Av. Ital.* pl. 255 (1882).

w^1, x^1. ♀ imm. sk. St. Brides, S. Wales, Oct. Hon. W. Edwardes [P.].

Males and females from this district are unusually small, the former weighing barely 13 oz. and the latter from 12 to 12½ oz.

y^1. ♀ imm. sk. Coruña, N.W. Spain. Dr. V. L. Seoane [P.].

This specimen no doubt belongs to the form which has been termed *Perdix hispaniensis* by Reichenow.

Page 196. **Margaroperdix madagascariensis.**

Line 9 of synonymy, for *Tetrao madayascariensis* read *Tetrao madagarensis*.

Add :— Page 204. **Microperdix blewitti.**

Specimens *v*, *w*. (Types of the species.)

Add :— Page 215. **Arboricola rubrirostris.**

Peloperdix rubrirostris, *Vorderm. Nat. Tijd. Ned. Ind.* xlix. p. 69 (1889) [Sumatra].

Add :— Page 219. **Arboricola sumatrana.**

Peloperdix personata, *Vorderm. Nat. Tijd. Ned. Ind.* xlix. p. 67 (1889) [Sumatra].

Add :— Page 222. **Hæmatortyx sanguiniceps.**

b. ♂ ad. sk. Kina Balu, N. Borneo. A. H. Everett, Esq. [P.].

Differs from the female in having the chin and throat washed

with crimson, the fore part of the neck and chest deep crimson, and the tarsi considerably longer and armed with three pairs of spurs. Total length 10·5 inches, wing 6·6, tail 2·8, tarsus 2·3.

Add :— Page 225. **Rollulus roulroul.**

Rollulus rouloul, *Vorderm. Nat. Tijd. Ned. Ind.* l. p. 510 (1890) [Billiton].

Add :— Page 231. **Coturnix coturnix.**

Common Quail, *Selby, Brit. Orn.* i. pt. ii. pl. 62 (1833).

h[1], *i*[4]. ♂ ♀ ad. sk.	Madeira, Jan.	C. J. Cossart, Esq. [P.].
k[4]. ♀ ad. sk.	Inverness, Scotland, Oct.	W. R. Ogilvie Grant, Esq. [P.].
l[4]. ♀ ad. sk.	Elgin, Scotland, Sept.	Sir W. Gordon Cumming [P.].
m[4]–*y*[4]. ♂ ♀ ad., imm., et pull. st.	Cambridgeshire.	J. Baker [P.].
z[4]–*d*[5]. ♂ ♀ ad. sk.	Hungary, May, Aug., Sept.	Hungarian National Mus. [E.].
e[5]. ♀ ad. sk.	Aden.	H.E.Barnes,Esq.[P.].
f[5], *g*[5]. ♂ ad. st.	India (*Blyth*).	India Museum [P.].
h[5], *i*[5]. ♂ ♀ ad. sk.	Shanghai, Oct.	F. W. Styan, Esq. [P.].

Add :— Page 253. Subsp. *a*. **Excalfactoria lineata.**

Excalfactoria chinensis, *Vorderm. Nat. Tijd. Ned. Ind.* l. p. 514 (1890) [Billiton].

Add :— Page 283. **Acomus erythrophthalmus.**

Specimen *b*. (Type of *Phasianus purpureus*, Gray.)

Page 288. **Lophura ignita.**

Specimens *b*–*e*. *For* (Types of species) *read* (Types of *Euplocamus nobilis*, Scl.)

Add :— Page 334. **Phasianus versicolor.**

n. ♀ ad. sk.	Hereford, Sept.	O. E. Cresswell, Esq. [P.].

Page 348. **Gallus lafayetti.**

3rd line from the bottom, for *Gallus lafayettii*, Des Murs &c. (1849), read *Gallus lafayetii*, Des Murs, &c. (1845).

Add :— Page 363. **Argusianus argus.**

Argusianus argus, *Vorderm. Nat. Tijd. Ned. Ind.* xlix. p. 69 (1889) [Sumatra].

Add :— Page 368. **Pavo cristatus.**

l'. ♂ ad. st.	India.	A. E. Durham, Esq. [P.].
m'. ♀ ad. sk. [albino].	England.	Earl of Gainsborough [P.].

Add :— Page 379. **Numida ptilorhyncha.**

Numida ptilorhyncha, *Sharpe, Bull. Brit. Orn. C.* no. xi. p. v (1893) [40 miles S.W. of Suakin].

Add :— Page 427. **Cyrtonyx sallæi.**

Cyrtonyx sallæi, *Salvin & Godman, Ibis*, 1889, p. 242 [Guerrero].

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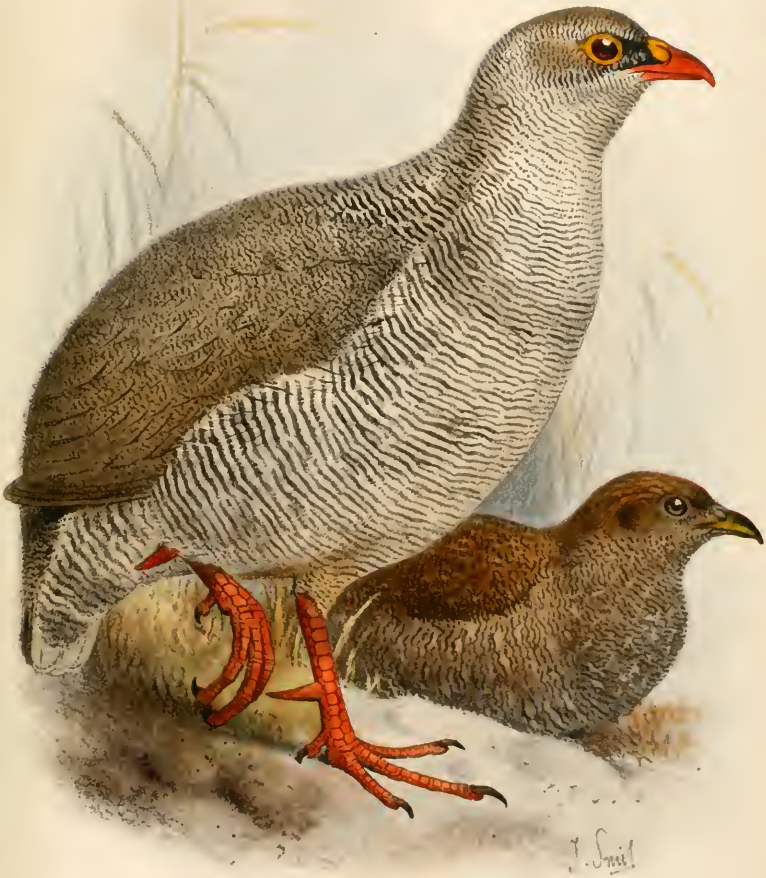

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